2001 Washington State Labor Market and Economic Report

The Right Connection for
Labor Market Information

Washington State
Employment Security

LMEA

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Data appendices for selected chapters are available in hard copy, on diskette, and on the LMEA Internet homepage (http://www.wa.gov/esd/lmea). For more information, contact Gary Kamimura at (360) 438-3152 or the Labor Market Information Center at 1-800-215-1617.

Executive Summary

- As quarter after quarter unfolded in 2001, Washington's economy experienced progressively softening annual rates of nonfarm employment growth to the extent that by the third quarter of 2001, nonfarm employment actually contracted (-0.3 percent) for the first time since the first quarter of 1993 (-0.1 percent). The recent decline, when viewed along side other declining state economic indicators, particularly revenue collections, has been termed a state recession coincident with the broader national recession, which was not the case in 1993.

- Despite the slowing economy, several Washington sectors continued to post relatively strong employment growth from third quarter 2000 to third quarter 2001 led by health services, which added 7,900 jobs in response to an acute shortage of health care professionals, particularly nurses and technologists. Local and state public education followed by adding 7,100 and 2,500 jobs, respectively. Local schools, in particular, responded to Initiative 728, which channeled state general funds to school districts to improve student learning, by hiring more teachers to reduce class sizes. Prepackaged software remained a strong growth sector with 2,400 net new jobs, thanks largely to continued hiring at Microsoft. Engineering and management was another growth sector, adding 1,700 jobs tied largely to the 10-year, $4 billion Hanford nuclear waste cleanup project. Consumer-related general merchandise stores (+2,200), eating and drinking places (+2,000), and amusement and recreation services (+1,000) rounded out the list of growth sectors.

- Business services topped the list of Washington's weak employment sectors with a loss of 12,500 jobs from third quarter 2000 to third quarter 2001, a 180 degree turn from its position as one of the strongest a year ago. Much of the loss was from the sector's temporary help supply component, which is adversely affected by downturns in the business cycle as firms shed non-permanent workers. Additionally, 4,500 of the loss came from computer and data processing services (excluding prepackaged software, which added 2,400 jobs), which speaks to the crash among service-related "dot.coms" that proffer information over the Internet. Miscellaneous retail trade lost 2,300 jobs which, while seemingly unrelated, is largely comprised of retail-related "dot.coms" that sell goods over the Internet.

- Other weak employment sectors in Washington were manufacturing-based, but still reflected high-tech woes. Electronic and electrical equipment (-2,200) and industrial machinery and computer equipment (-1,700) were hurt by excess global capacity coupled with falling demand for computers, computer peripherals, and telecommunications equipment. A year ago, these sectors were among those with strong employment growth. Resource-based sectors also made the list: lumber and wood products (-2,300), primary metals (-1,400), paper and allied products (-1,200), and food and kindred products (-1,200). Contraction in forest products was attributable to excess global supply and heightened foreign competition in the face of weak markets, particularly the U.S. housing market. Primary metals, essentially aluminum in Washington, was caught up in West Coast energy price speculation that drove up wholesale energy costs and added to the already weak position created by excess global supply and slack demand.

- Washington's seasonally adjusted unemployment rate continued its slow, but steady, upward creep in 2001, rising from a record low 4.4 percent in the fourth quarter of 1999 to 6.0 percent by the third quarter of 2001. Given the jump to 6.6 percent in October 2001 and then to 7.0 percent in November 2001, the state might be facing what amounts to a two percentage point jump in its seasonally adjusted jobless rate over a two-year period ending in the fourth quarter of 2001. This is relatively low by historical standards, but may not seem so due to the four consecutive years of record low unemployment below 5 percent for a peacetime economy from 1997-2000, a feat otherwise achieved only during the Korean War of 1951-53.

- The Two Washingtons continue to be an issue. Higher unemployment and lower job growth characterizes great portions of the less diverse, resource-based economies of the state. Regardless of whether one views the state in terms of western versus eastern, metro versus non-metro, rural versus urban, or Puget Sound versus non-Puget Sound, the unemployment rate divergence tends to be in the 5.0-5.5 percent range versus 7.5-8.0 percent range, respectively. At the same time, it is important to note that while the western, metro, urban, and Puget Sound rates rose over the year, the eastern, non-metro, rural, and non-Puget Sound rates fell. This suggests that the economies of the latter are essentially holding their own and that rising statewide jobless rates have been propelled primarily by the former.

- The past year introduced two anomalies to Washington's economic landscape: drought and energy. Water-intensive industries represent only 2.3 percent of statewide employment, but account for as much as a fifth of the direct employment base in some counties. The counties with the highest concentration of water-intensive industries are largely in central Washington, southwest Washington, and the Olympic Peninsula. Similarly, water-intensive industries account for only 1.9 percent of total wages statewide, but as much as a fifth of all wages in some counties. Energy-intensive industries account for 5.5 percent of total employment statewide, but account for nearly 20 percent of direct employment in some counties. The counties with the greatest concentration of energy-intensive sectors can be found in western Washington and northeast Washington. Similarly, energy-intensive industries account for 9.0 percent of total wages statewide, but as much as a third of the wages in some Washington counties.

- The Washington and U.S. Index of Leading Economic Indicators have been on divergent paths since converging three years ago in the latter half of 1998. Since then, the U.S. index climbed sharply in 2000 but has since stagnated at that level. The Washington index peaked around the same time as the U.S. index, but has trended steadily downward since then. Both indicators are consistent with the quarterly unemployment rate patterns witnessed both statewide and nationally, signaling the approaching end of the respective record-setting state and national economic runs.

- National economic output as measured by real Gross Domestic Product retreated quickly over the past four quarters, declining from a modest 1.9 percent annual rate of growth in the fourth quarter of 2000 to -1.1 percent in the third quarter of 2001. The latter figure reflected the biggest decline in economic output since the first quarter of 1991 (-2.0 percent). Based on this and other data, the National Bureau of Economic Research's Business Cycle Dating Committee announced on November 26 that a peak in business activity occurred in the U.S. economy in March 2001, thus marking the end of an expansion and the beginning of a recession. All told, the business cycle lasted for 10 years—the longest since NBER began dating them—beginning in March 1991 and ending in March 2001.

- The Consumer Price Index for All Urban Consumers (CPI-U) for Seattle-Tacoma-Bremerton and the U.S. showed both with about the same level of inflation in the first half of 2000. Since then, the Seattle-Tacoma-Bremerton CPI-U moved into the 4 percent range while the U.S. CPI-U remained at or just below 3.5 percent before dipping to 2.7 percent in the third quarter of 2001. On the whole, inflation in the Seattle area and nationally appears to be stable. The October 2001 data show that the annual rate of inflation decelerated in both the Seattle-Tacoma-Bremerton region and nationally to 3.2 percent and 2.1 percent, respectively.

- The U.S. Employment Cost Index (ECI) eased in 2001 after sharp rises in the 4.3 percent to 4.4 percent range in 2000. A breakdown shows that benefit costs have escalated most rapidly since 1999. After operating in the 2.0 percent to 2.5 percent range in 1997-98, they soared into the 5 percent range in 2000 due to rising health care costs in the form of greater prescription drug usage and rising prescription drug costs. Wage and salary growth, meanwhile, eased incrementally to 3.6 percent in the third quarter of 2001 after peaking and holding at 4.0 percent through the first three quarters of 2000.

- Short-term interest rates are poised to help jump-start the economy once business activity and consumer demand return. The Federal Open Market Committee (FOMC) has aggressively loosened monetary policy by cutting the target for the federal funds rate from 6.50 percent in the third quarter of 2000 to 3.50 percent by the third quarter of 2001. Since the third quarter of 2001, the FOMC lowered the federal funds rate to 2.5 percent in October, 2.0 percent in November, and 1.75 percent in December, which represented the ninth, tenth, and eleventh cuts in 12 months. Unless the Fed acts again in December, this will translate into 2.01 percent for the fourth quarter of 2001.

- Washington's total personal income was more than $184 billion in 2000, which translated into 3.2 percent real growth over the year. This marked the second consecutive year of moderating real growth since the 7.5 percent posted in 1998. Moreover, Washington's modest personal income growth in 2000 dropped it from 3rd among the states in 1999 to 35th in 2000. The more than $135 billion in net earnings by place of work constituted nearly three-quarters of the state's total personal income in 2000, which translates into a considerable impact on personal income as a whole. In 2000, earnings by place of work climbed 3.1 percent in real terms and effectively set the pace for personal income growth. Likewise, the modest 3.2 percent real growth in wages and salaries, which makes up more than 80 percent of earnings by place of work, in Washington in 2000 established the pattern for the growth that occurred in earnings by place of work.

- Washington's per capita income was $31,129 in 2000, which translated into over-the-year real growth of 2.1 percent—lower than the 3.3 percent or 5.8 percent showing in 1999 and 1998, respectively. In fact, Washington's per capita income growth in 2000 was subdued enough that it actually lost ground vis-à-vis the nation's per capita income, slipping to 105.7 percent of the latter from 106.9 in 1999. This was a shift from the previous four years during which it steadily widened its advantage over the U.S. per capita income.

- Washington's average covered wage was $37,063 in 2000, reflecting a real year-over-year gain of only 1.3 percent, a departure from the 6.4 percent and 6.1 percent real growth seen in 1998 and 1999, respectively, not to mention the 4.5 percent posted in 1997. Washington's rather small real increase in 2000 caused its average covered wage to slip to 105 percent of the U.S. average, which nevertheless remains quite respectable. In either case, software wages were a prominent factor. Without software, for example, the state's real wage gain for 1999 would have been 1.7 percent rather than 6.1 percent. Yet, in 2000, a 27 percent decline in software wages revealed that the state's average covered wage would have grown 6.6 percent instead of 3.3 percent had the software sector been removed from the equation.

- Washington's real average hourly earnings grew at net positive rates in 2000, with construction, trade, and the manufacturing sectors revealing a mix of outcomes compared to the previous year with some posting higher growth while others posted lower growth.

Labor Market and Economic Developments

As 2001 unfolded, Washington's economy carried forth the pattern begun in 2000 of progressively softening annual rates of nonfarm employment growth. In fact, by the third quarter of 2001, the rate of nonfarm employment change went negative (-0.3 percent) for the first time since the first quarter of 1993 (-0.1 percent). Although the recent decline, when coupled with other state economic indicators, has been coined a state recession coincident with the broader national recession, that was not the case in 1993. As 2001 unfolded, Washington's annual rate of nonfarm employment change also shifted from being above the national average to somewhat below the national average (*see Figure 1*).

The downward path of Washington's nonfarm employment growth in 2001 can be linked to softening in its manufacturing and nonmanufacturing sectors alike (*see Figure 2*). The manufacturing situation is not a new story. Manufacturing began contracting in late 1998 and has continued to do so through the present period. Nonmanufacturing, however, is a different story altogether. Virtually all of Washington's nonfarm job growth has come from nonmanufacturing since late 1998. Even as manufacturing started to contract in late 1998, nonmanufacturing continued expanding at roughly 2.5 percent a year. Nonmanufacturing growth began slowing in the third quarter of 2000, however, and continued easing to where it was a scant 0.3 percent in the third quarter of 2001. In the minds of many, this was akin to no growth at all.

Despite the slowing economy, there remained a number of sectors that continued to post relatively strong employment growth from third quarter 2000 to third quarter 2001 (*see Figure 3*). Topping the list was health services, which continues to experience an acute shortage of health care professionals, particularly nurses and technologists. It added 7,900 jobs over the period. That was followed by both local and state public education, which added 7,100 and 2,500 jobs, respectively. Local school systems, in particular, were responding to the passage of Initiative 728, which channeled $393 million in state general funds to school districts to improve student learning, by hiring more teachers to reduce class sizes.

Figure 1
Nonfarm Wage and Salary Employment Growth
Washington and United States, 1997-2001
Seasonally Adjusted Annual Rates of Change
Source: Employment Security Department and U.S. Bureau of Labor Statistics

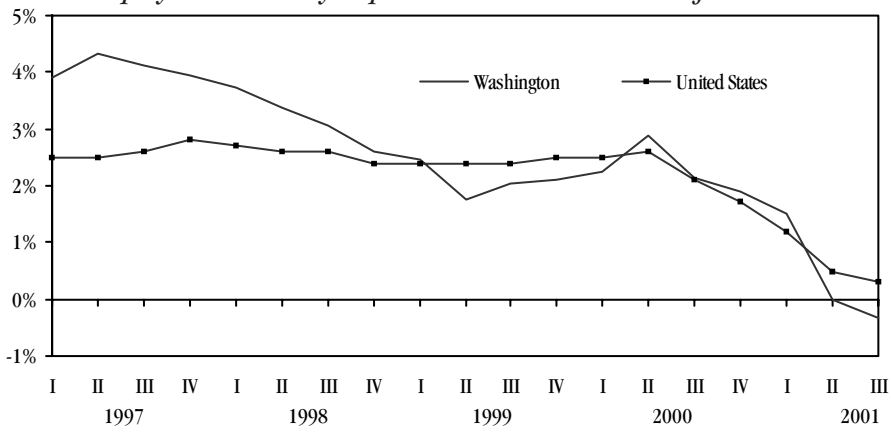
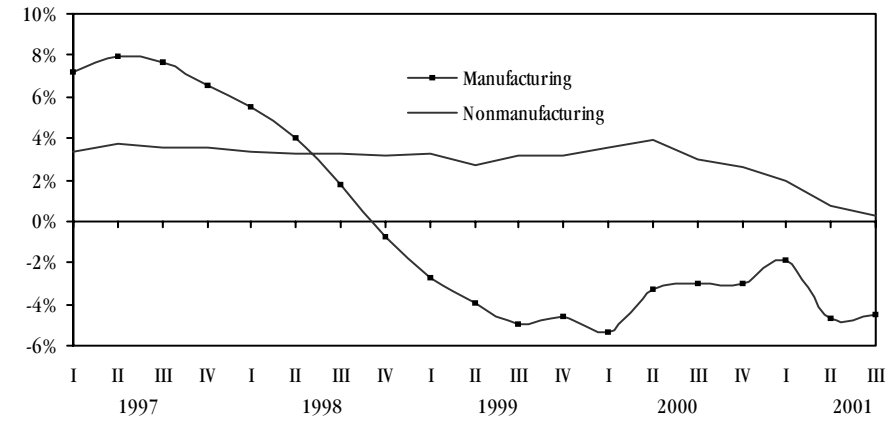


Figure 2
Manufacturing and Nonmanufacturing Employment
Washington, 1997-2001
Seasonally Adjusted Annual Rates of Change
Source: Employment Security Department



Prepackaged software remained a strong growth sector with 2,400 net new jobs, thanks in no small part to the continued prowess of Microsoft. In fact, prepackaged software is one of the few high-tech sectors that remain high growth following the so-called high-tech meltdown. Engineering and management was another. It added 1,700 jobs largely due to the 10-year, $4 billion Hanford nuclear waste vitrification project, which will transform waste currently stored in aging tanks into more stable glass logs. Consumer-related general merchandise stores (+2,200), eating and drinking places (+2,000), and amusement and recreation services (+1,000) rounded out the list of growth sectors, though it can be argued that their growth was more modest than in the past.

Perhaps equally notable was the list of sectors that fell off the strong growth list over the year. That group included construction, finance, and the computer and data processing and temporary help components of business services. These were indicative of a general downturn in the business cycle. Also, given its recent round of layoffs, it is ironic that aircraft and parts made the list of sectors with strong employment growth. It is worth noting, though, that until Boeing's post-September 11 announcement, the company had been hiring at a modest but steady pace since January of 2001. If anything, this underscores how quickly a sector outlook can change.

On the flip side, while the list of weak employment sectors in Washington was clearly dominated by manufacturing, it was business services that topped the list with a loss of 12,500 jobs from third quarter 2000 to third quarter 2001 (*see Figure 4*). Of note is the fact that business services was one of the strongest employment sectors in Washington over the same period the year before. This quick turnabout for the worst would appear to validate the status of business services as a leading indicator of sorts. Most of these losses were from the temporary help supply component of business services. While there are different schools of thought on how temporary help is affected by turning points in the business cycle, it is generally believed that firms shed temporary workers as business slows. Additionally, 4,500 of the 12,500 jobs lost in business services came from computer and data processing services (excluding prepackaged software, which added 2,400 jobs and made the list of strong employment growth sectors). This speaks directly to the losses seen among service-related "dot.coms"—companies principally engaged in proffering *information* over the Internet. Meanwhile, miscellaneous retail trade lost 2,300 jobs. While this may seem unrelated, miscellaneous retail trade is largely comprised of retail-related "dot.coms" —companies principally engaged in selling *goods* over the Internet.

Over the third quarter 2000 to third quarter 2001 observation period, the high-tech meltdown was evident even among the manufacturing sectors that populated the list of weak employment sectors in Washington. Electronic and electrical equipment (-2,200) and industrial machinery and computer equipment (-1,700) made the list as excess global capacity coupled with

Figure 3
Strongest Employment Sectors
Washington, 3rd Quarter 2000-3rd Quarter 2001
Seasonally Adjusted Annual Change
Source: Employment Security Department

Industry	Average Covered Wage	Job Gain	Percent Change
Health Services	$33,219	7,900	1.6%
Local Education	$29,055	7,100	3.7%
State Education	$33,882	2,500	3.3%
Prepackaged Software	$282,807	2,400	7.0%
Social Services	$17,902	2,400	3.8%
General Merchandise Stores	$23,110	2,200	4.3%
Eating and Drinking Places	$13,557	2,000	1.1%
Aircraft and Parts	$62,199	1,700	2.0%
Engineering and Management Services	$48,909	1,700	1.4%
Amusement and Recreation Services	$21,653	1,000	2.1%

Figure 4
Weakest Employment Sectors
Washington, 3rd Quarter 2000-3rd Quarter 2001
Seasonally Adjusted Annual Change
Source: Employment Security Department

Industry	Average Covered Wage	Job Loss	Percent Change
Business Services	$79,193	-12,500	-6.6%
Computer and Data Processing	$171,179	-4,500	-6.3%
Miscellaneous Retail Trade	$24,941	-2,300	-2.5%
Lumber and Wood Products	$37,950	-2,300	-7.0%
Electronic/Electrical Equipment	$43,186	-2,200	-10.9%
Industrial/Computer Equipment	$53,578	-1,700	-6.6%
Other Transportation Equipment	$39,684	-1,700	-22.7%
Printing and Publishing	$35,174	-1,600	-6.5%
Special Trade Contractors	$36,285	-1,600	-1.6%
Apparel and Accessory Stores	$22,773	-1,400	-5.5%
Building Material/Garden Supplies	$26,117	-1,400	-6.5%
Primary Metals	$46,624	-1,400	-13.0%
Paper and Allied	$52,135	-1200	-8.0%
Food and Kindred Products	$31,916	-1200	-2.8%

declining business and household demand for computers, computer peripherals, and telecommunications equipment precipitated a shakeout in the sectors. During the third quarter 1999 to third quarter 2000 period, these sectors were among those displaying strong employment growth. A number of resource-based sectors also made the list: lumber and wood products (-2,300), primary metals (-1,400), paper and allied products (-1,200), and food and kindred products (-1,200). Contraction in the two forest product categories was attributable to similar forces: excess global supply and heightened foreign competition in the face of weak markets, particularly the U.S. housing market. Primary metals is essentially aluminum in Washington. Already beset by weak prices caused by excess global supply and slackening demand, the state's aluminum industry was confronted by a West Coast energy shortage that drove up wholesale electricity prices and made their operations unprofitable. Job losses were stemmed, at least temporarily, by arrangements between several companies and the Bonneville Power Administration that had those companies shuttering their operations, selling the used power to BPA, and using some of the revenue from those power sales to pay workers.

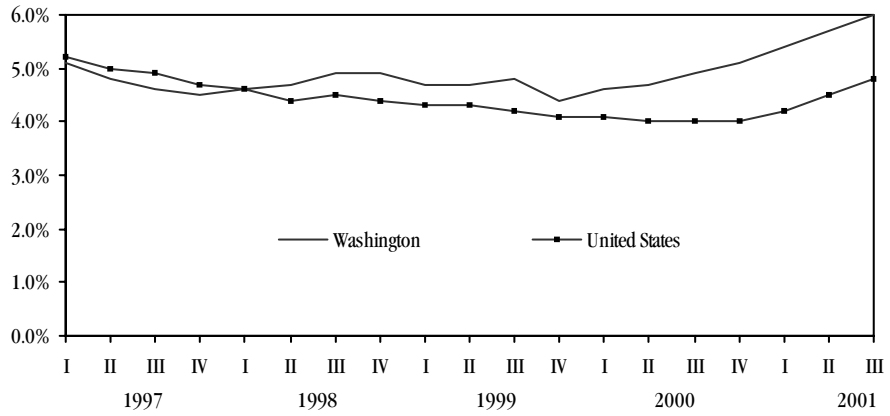
Against this backdrop, Washington's seasonally adjusted unemployment rate continued its slow, but steady, upward creep in 2001 (*see Figure 5*). From a record low 4.4 percent in the fourth quarter of 1999, it rose over successive quarters to 6.0 percent by the third quarter of 2001. While the roughly one and a half percentage point increase over a period of about two years is worth noting, it should also be noted that the state's jobless rate remains reasonably low by historical standards. It may not seem low because of the years of unprecedented low unemployment that preceded it. Bear in mind, however, that the four consecutive years of annual unemployment below 5 percent in a peacetime economy from 1997 to 2000 was an all-time record. Only once during the Korean War of 1951-53 did the state achieve a similar feat. The corresponding years of exceptionally strong job growth and the *birth dearth* cohort of the population that slowed labor force growth were key factors, as was slower in-migration. Strong job growth is not currently a factor, but the other two are. As such, there remain forces that should keep jobless rates in relative check.

In the 1990s, the Washington-U.S. difference with respect to unemployment rates tightened to within half a percentage point, with Washington holding the higher of the two as it traditionally had. During 2000, however, the distance between the two began widening again, and that pattern continued into 2001. By the third quarter of 2001, the separation between the two was more than a full percentage point with Washington at 6.0 percent compared to 4.8 percent nationally. Still, the historical gap between the Washington and U.S. jobless rates has clearly narrowed. For example, the spread had been as much as four percentage points in the 1970s while in the 1980s it was more than one percentage point. Much of this relates to Washington's far greater than average seasonal gyrations that make for greater extremes in unemployment in much of the resource-based economies of the state during the course of the year. It may also be that Washington has been beset by sharper cyclical trends.

At this point in the business cycle, it is reasonable to assume that voluntary churning or turnover in the economy will subside as the labor market shifts from a "seller's market" favoring workers to a "buyer's market" favoring employers. As new job creation and opportunities slow, employers will see a return to more stable workforces. In turn, workers will see less demand and active recruitment as well as less upward mobility either internally or by moving from employer to employer.

Three factors have changed the historical relationships. One is extensive restructuring and realignment in many key Washington-based industries, namely lumber and wood products, aluminum, paper and allied products, shipbuilding, and finance. Inefficiencies have been weeded out and employment is far less volatile than in the past. Some of the "smoothing" in the broader economy relates to a second factor: aggressive use of just-in-time temporary help rather than "see-saw" permanent hiring. This represents one of the most dramatic shifts in internal company staffing patterns in

Figure 5
Employment Rates
Washington and United States, 1997-2001
Seasonally Adjusted Quarterly Averages
Source: Employment Security Department and U.S. Bureau of Labor Statistics



decades. The overall effect has been more stable core employment with seasonal add-ons hired as needed from the temporary help sector.

This, in turn, is contributing to a third driver: the structural shift over time to a more service-based economy. From three-quarters of the economy in 1980 and 77 percent in 1990, the services-producing sectors now constitute 81 percent of Washington's total employment base. Growth has been led by what is commonly called "producer-services"—finance, insurance, and real estate; transportation services; engineering and legal services; and business services including temporary help services and computer processing and software. All these tend to be more stable elements of the economy—both seasonally and cyclically—and each carries significant job multipliers as important exporters of services from the region.

Though Washington's metropolitan area unemployment rates, have all risen over the year certainly the tightest labor markets continue to be centered in the central Puget Sound region (*see Figure 6*). Unemployment in the Seattle-Bellevue-Everett PMSA has averaged roughly 4.6 percent thus far in 2001 (January to October), not altogether bad considering the contraction in high tech, construction, and retail trade. Indeed, the Seattle-Bellevue-Everett PMSA's rate hints at just how tight that labor market was last year. Some of this labor market easing is spreading south into Pierce, Kitsap, Thurston, and Clark counties as reflected in their year-to-date jobless rates in the 5 to 6 percent range. Eastern Washington metropolitan areas also saw higher, though not unexpectedly high, year-to-date unemployment rates with Spokane at 6.2 percent, Tri-Cities at 6.7 percent, and even Yakima at 10.4 percent.

Even so, the *Two Washingtons* phenomenon continues to present itself as an issue (*see Figure 7*). Higher unemployment and lower job growth characterizes great portions of the less diverse, resource-based economies of the state. Regardless of whether one views the state in terms of western versus eastern, metro versus non-metro, rural versus urban, or Puget Sound versus non-Puget Sound, the unemployment rate divergence tends to be in the 5.0-5.5 percent range versus 7.5-8.0 percent range, respectively. Of note, however, is the fact that the distribution was different in 2001 than it was in 2000. Though the average unemployment rate for January-October rose for all regions from 2000 to 2001, it rose discernably more in the western, metro, urban, and Puget Sound regions of the state than it did in the eastern, non-metro, rural, and non-Puget Sound regions of the state. This suggests that the economies of the latter essentially held their own against their regional counterparts. It also suggests that the labor market softness that translated into an increase in the state's unemployment rate was not distributed evenly across all regions. Rather, it was softness in the western, metro, urban, Puget

Figure 6
Metropolitan Area Unemployment Rates
Washington, January-October 2001 Average
Source: Employment Security Department

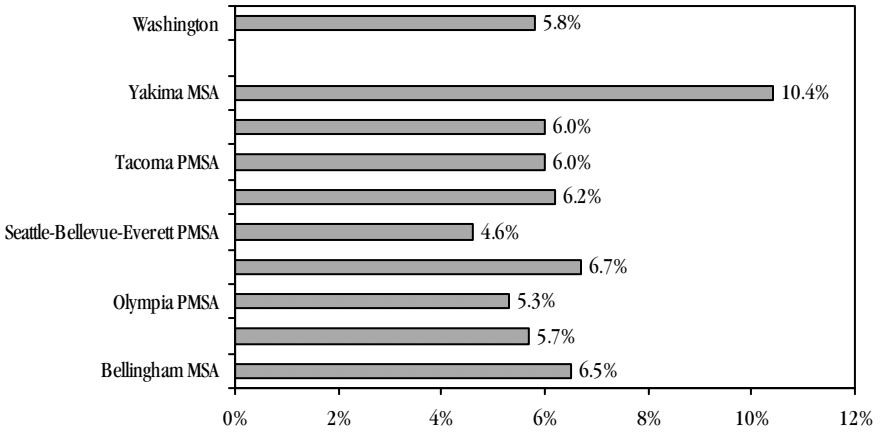
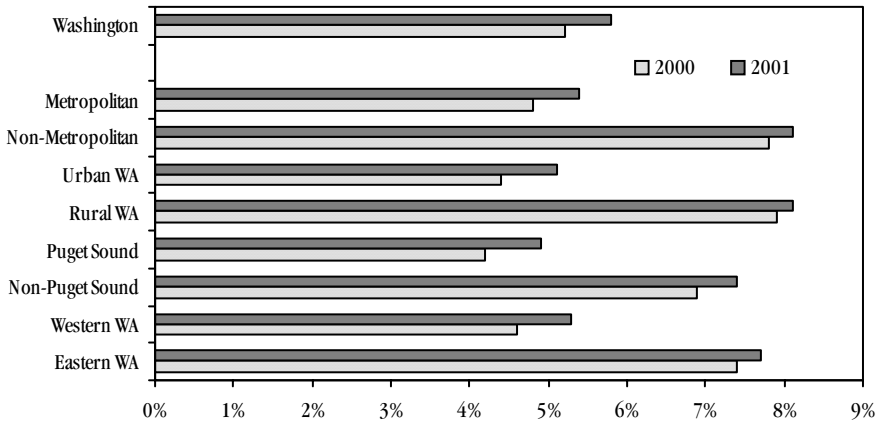


Figure 7
Regional Unemployment Rates
Washington, January-October 2001 Average
Source: Employment Security Department



Sound regions that principally drove the statewide increase. This was a notable shift from past increases in the state's unemployment rate, which were typically fueled by dislocation in resource-based industries. That said, the strong seasonal component inherent in the economic base of the eastern, non-metro, rural, and non-Puget Sound regions will nevertheless continue to drive their rates above their regional counterparts in terms of jobless rates.

Speaking of strong seasonal components, a glance at value of agricultural production data over the past couple of years shows that Washington's farm sector has been hit hard as worldwide overproduction has caused falling commodity prices in at least two key Washington products—apples and potatoes (*see Figure 8*). Total value of agricultural production in Washington was $5.4 billion in 2000, up 2 percent over the year but still well below the $5.9 billion high in 1995. At more than $760 million, apples led all other agricultural commodities in terms of value of production in 2000. However, its value of production was down 11.2 percent compared to 22 percent in 1999. Following apples were milk, cattle, and wheat. Wheat garnered $459 million in total value of production in 2000. This reflected a 32.8 percent increase over the year and was quite a turnaround from the 17 percent decrease the year before. Sweet cherries and grapes (mostly for wine) also experienced strong growth in 2000 with the $155 million cherry harvest translating into a 33.5 percent increase in value of production and the $127 million grape harvest netting an 11.4 percent increase in value of production.

The past year brought two factors that were real anomalies on Washington's economic landscape. First there was drought, then there was energy. First the drought. To provide some context, 75 percent of Washington's fresh water is used for irrigation. Eight counties account for more than 90 percent of the state's total irrigation use. Four account for more than 70 percent. All are rural, central Washington counties dominated by the tree fruit industry. But tree fruits are not the only vulnerable industry. Other industries that will bear the brunt of the drought are pulp and paper, chemicals, petroleum, and electronic components. Not fully represented on the list but certainly important is food processing, a significant state industry that was on a second tier list.

Water-intensive industries represent only 2.3 percent of statewide employment. This may not seem like much to concern ourselves about. However, they account for as much as a fifth of the employment base in some counties (*see Figure 9*). And bear in mind that these figures represent only the direct employment impacts. They do not include secondary or downstream impacts borne by

Figure 8
Value of Production, Percent Change
Washington, 1999-2000
Source: Washington State Department of Agriculture

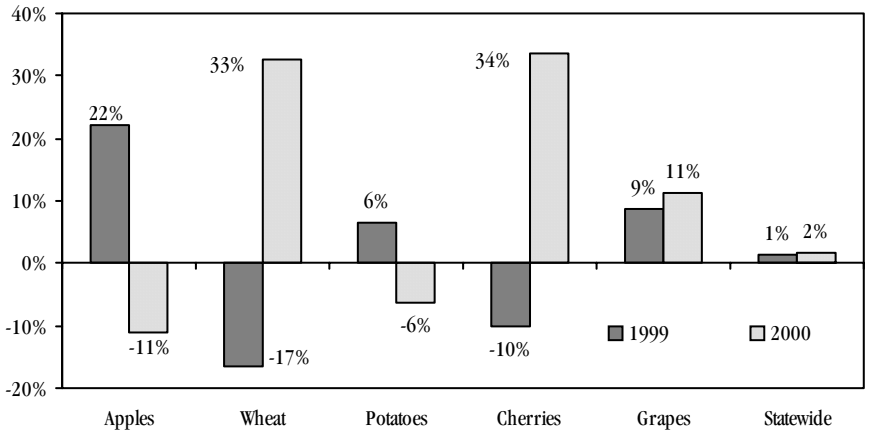
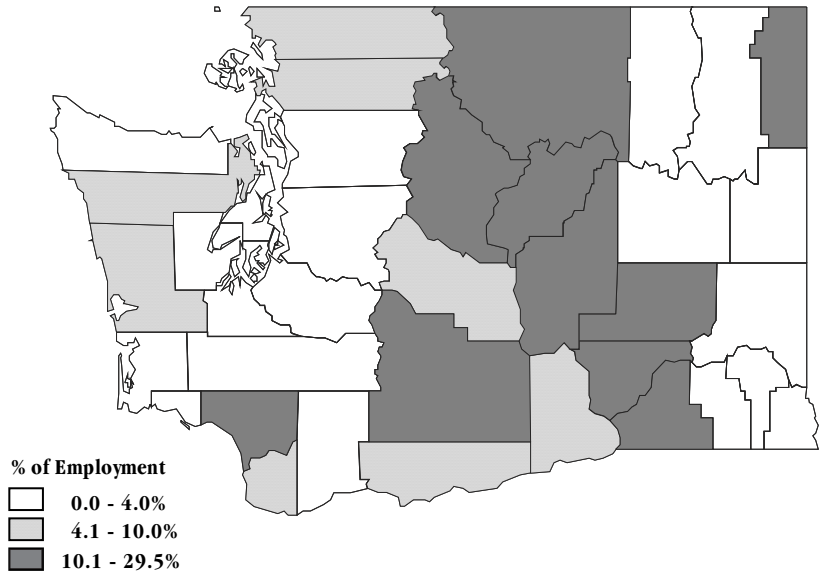


Figure 9
Employment in Water-Intensive Industries
as a Share of County Employment, 2000
Source: Employment Security Department, LMEA



complementary industries or the loss of disposable income. The counties with the highest concentration of water-intensive industries are largely in central Washington, southwest Washington, and the Olympic Peninsula. Water-intensive industries account for only 1.9 percent of total wages statewide. Again, a fairly modest overall impact. However, because the industries identified as water-intensive tend to pay relatively well, they represent as much as a fifth of all wages in some counties (*see Figure 10*). And again, this is only the direct impact.

Figure 10
Total Wages in Water-Intensive Industries
as a Share of Total Wages, 2000
Source: Employment Security Department, LMEA

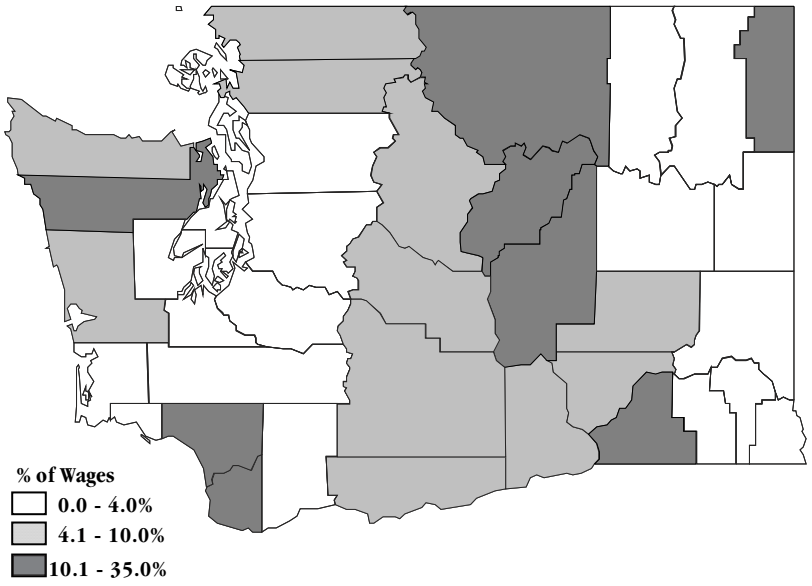
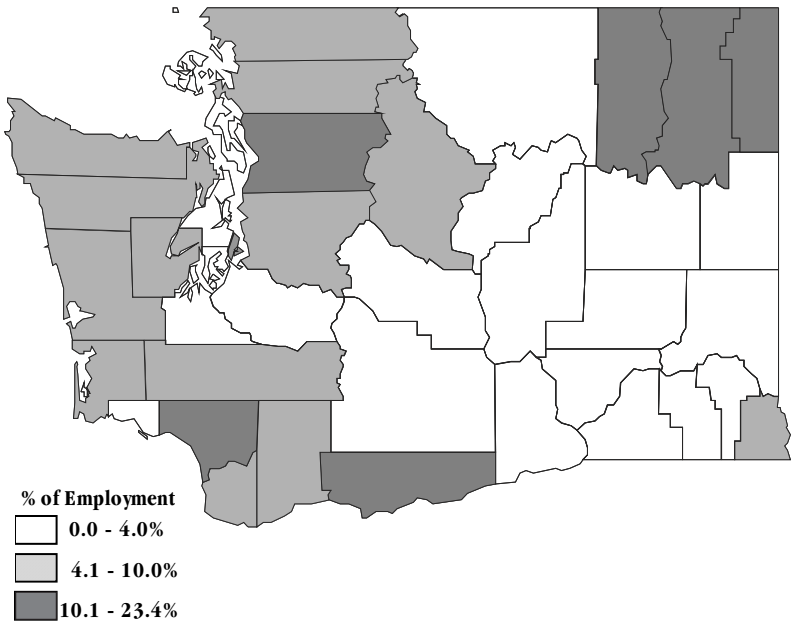


Figure 11
Employment in Energy-Intensive Industries
as a Share of County Employment, 2000
Source: Employment Security Department, LMEA



Then there is energy. When we talk about energy-intensive industries, we are talking about food processing, pulp and paper, chemicals, petroleum, primary metals, especially aluminum smelting, and aircraft and parts. Energy-intensive industries account for 5.5 percent of total employment statewide. Energy has a slightly higher profile thanks to aerospace. Still, it's not that much greater than what we saw with water. However, they account for nearly 20 percent of employment in some counties (*see Figure 11*). And again, these are only the direct impacts. The counties with the greatest concentration of energy-intensive sectors can be found in western Washington and northeast Washington. Similarly, energy-intensive industries account for 9.0 percent of total wages statewide, but as much as a third of the wages in some Washington counties (*see Figure 12*).

Turning our attention nationally, two forward-looking indicators—the Washington and U.S. Index of Leading Economic Indicators—have been on divergent paths since converging three years ago in the third and fourth quarters of 1998 (*see Figure 13*). Since that time, the U.S. Index of Leading Economic Indicators climbed sharply in 2000 to peak around 110 by the second half of that year, but has since stagnated around that level. The Washington Index of Leading Economic Indicators peaked around the same time as the U.S. index at 105.5, but has trended steadily downward since then. By the third quarter of 2001, it was off nearly 7 percent from its peak at 98.2. These indicators were certainly consistent with the quarterly unemployment rate patterns witnessed both statewide and nationally, signaling the approaching end of our record-setting state and national economic runs.

In a pullback that was foreshadowed by the U.S. Index of Leading

Economic Indicators, national economic output retreated quickly over the past four quarters (*see Figure 14*). Real Gross Domestic Product (GDP) declined progressively from a modest 1.9 percent annual rate of growth in the fourth quarter of 2000 to -1.1 percent in the third quarter of 2001 based on a preliminary estimate. The third quarter 2001 figure reflected the biggest decline in economic output since the first quarter of 1991 when it was -2.0 percent. This may have been prompted in part by the lagged effect of a succession of interest rate hikes from the latter half of 1999 through the first half of 2000 that were designed to slow the economy. Based on this and other data, the National Bureau of Economic Research's Business Cycle Dating Committee announced on November 26 that a peak in business activity occurred in the U.S. economy in March 2001, thus marking the end of an expansion and the beginning of a recession. All told, the business cycle extended 10 years—the longest since NBER began dating them—beginning in March 1991 and ending in March 2001. Moreover, the national economy has been in recession for more than three-quarters of a year.

Figure 12
Total Wages in Energy-Intensive Industries
as a Share of County Total Wages, 2000
Source: Employment Security Department, LMEA

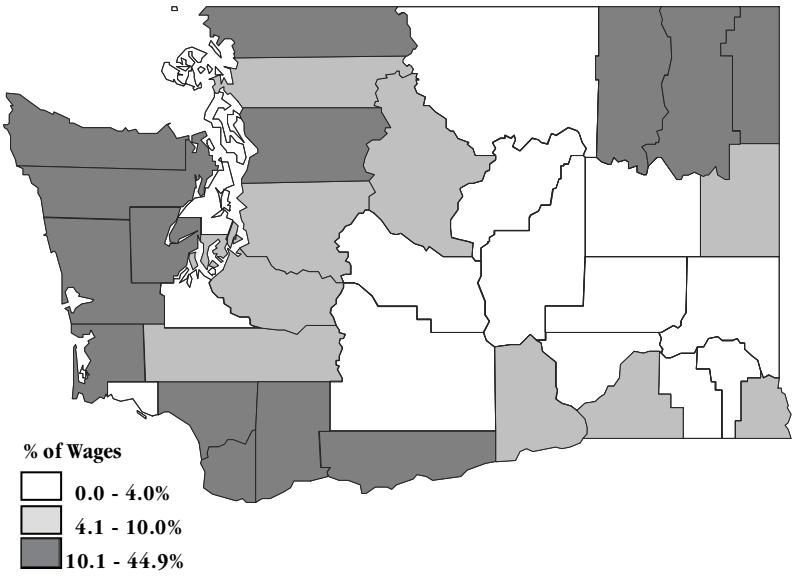
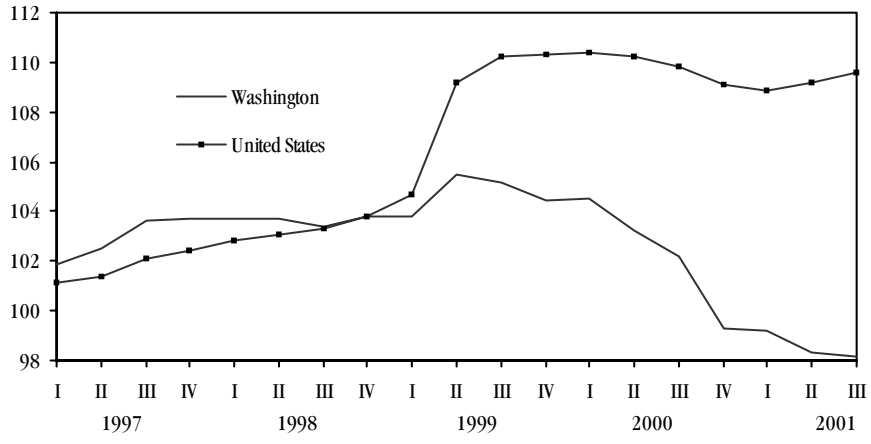


Figure 13
Index of Leading Indicators (Index IQ1996=100)
Washington and United States, 1997-2001
Source: Office of the Forecast Council



Washington enjoyed an even more impressive run than did the U.S. during the latter half of the 1990s as its Gross State Product (GSP) outpaced the national GDP. It is no surprise, of course, that Washington's economy was one of the high-flyers nationally. That was well publicized. It is interesting to note, however, just how prominent that growth was, building up progressively from less than 1 percent in 1995 to 7.6 percent by 1998 (*see Figure 15*). Comparatively, growth in real GDP, though healthy, was fixed at around 4 percent. Owing to a lag in data collection, GSP data are not yet available for 2000, let alone 2001, but it is a safe bet that Washington's annual rate of GSP growth has eased along with that of GDP.

Despite the backdrop of tepid economic performance both statewide and nationally, there are other indicators that suggest that the state and nation are well-positioned to mount a recovery when business activity and consumer demand returns. As of late, the changes in consumer prices, employer costs, and short-term interest rates have all trended favorable to the extent that these elements are viewed as potential initiators (or dampers) of economic and labor market activity.

Figure14
Real Gross Domestic Product Change
United States, 1997-2001
Source: U.S. Bureau of Economic Analysis

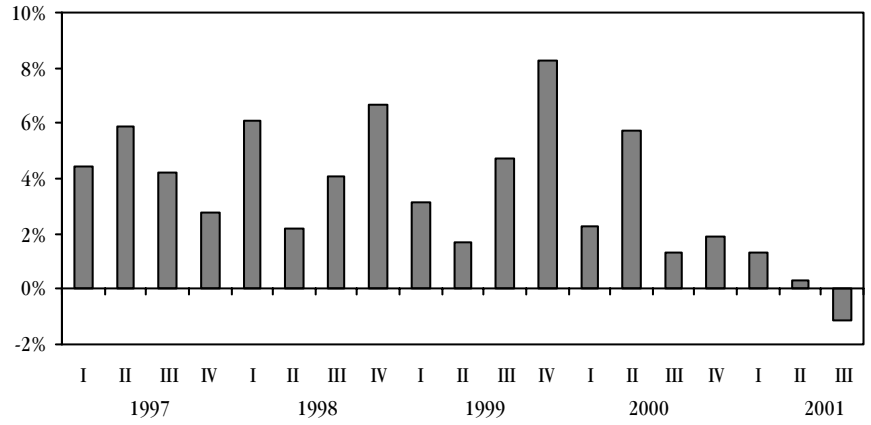


Figure 15
Real Gross Domestic Product and Real Gross State Product
1987-2000
Source: U.S. Bureau of Economic Analysis

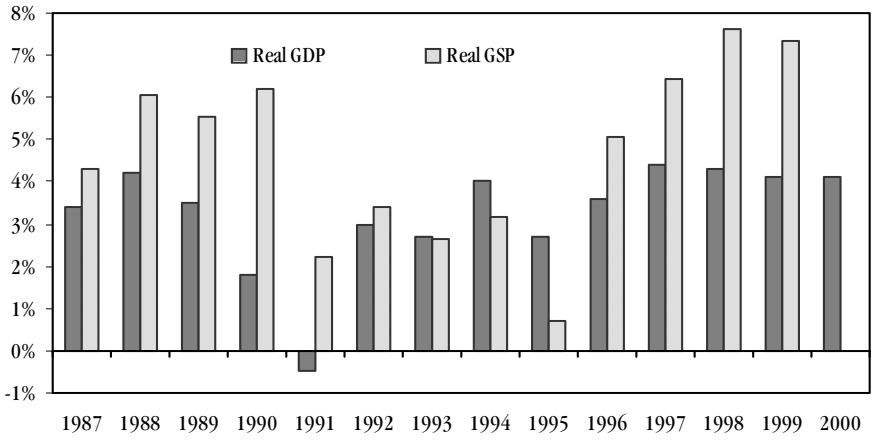
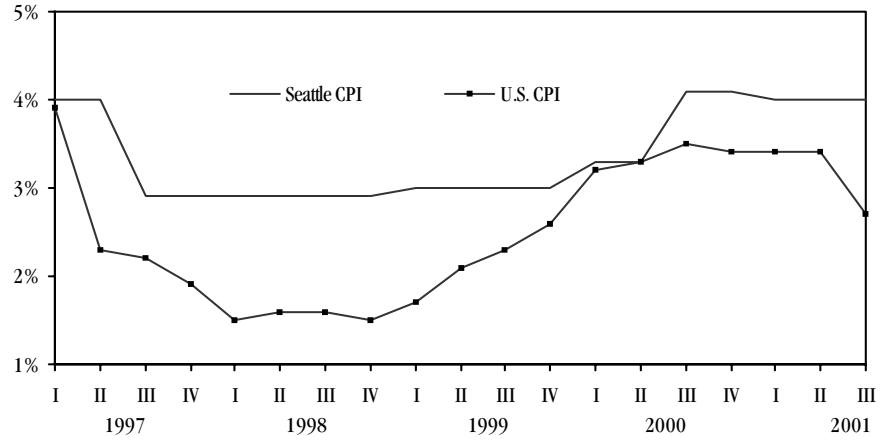


Figure 16
Consumer Price Index
Seattle and United States, 1997-2000
Source: U.S. Bureau of Labor Statistics



A comparison of the Consumer Price Index for All Urban Consumers (CPI-U) for Seattle-Tacoma-Bremerton and the U.S. clearly shows inflation for both at roughly the same level in the first half of 2000. In the proceeding quarters, however, the Seattle-Tacoma-Bremerton CPI-U moved into the 4 percent range while the U.S. CPI-U remained at or just below 3.5 percent in successive quarters before dipping to 2.7 percent in the third quarter of 2001 (*see Figure 16*). While inflation in the Seattle-Tacoma-Bremerton area moved above that for the U.S., the gap is not nearly as great as it was in 1998 and 1999, when the escalating cost of housing in the Seattle area in particular was a key factor. On the whole, inflation in the Seattle area and nationally appear to be holding steady. In fact, the latest data from October 2001 suggest that the annual rate of inflation growth is decelerating with the Seattle-Tacoma-Bremerton CPI-U at 3.2 percent and the U.S. CPI-U at 2.1 percent. Furthermore, the inflation forecast for the Seattle-Tacoma-Bremerton CPI-U and the U.S. CPI-U is for both to average 2.4 percent in 2002.

Following relatively modest postings in the 3.0 percent to 3.4 percent range in 1999, the U.S. Employment Cost Index (ECI) rose sharply into the 4.3 percent to 4.4 percent range in 2000, though it eased in 2001 (*see Figure 17*). A breakdown of the Employment Cost Index in terms of its wage and salary and benefit components shows that the latter has escalated most rapidly since 1999. After operating in the 2.0 percent to 2.5 percent range in 1997-98, benefits costs skyrocketed into the 5 percent range through the first three quarters of 2000. The principal driver was rising health care costs, which represent a major form of non-wage and salary compensation and which have been driven by greater prescription drug usage and rising prescription drug costs in particular. Wage and salary growth, meanwhile, eased incrementally to 3.6 percent in the third quarter of 2001 after peaking and holding at 4.0 percent through the first three quarters of 2000. The second to third quarter

of 2001 illustrates the impact of benefits on total compensation, though wage and salary growth eased from 3.7 percent to 3.6 percent, total compensation growth rose from 3.9 percent to 4.1 percent as benefit growth soared from 4.5 percent to 5.1 percent.

Short-term interest rates are certainly poised to help jump-start the economy once business activity and consumer demand return. Since January 2001, the Federal Open Market Committee (FOMC) has aggressively moved to loosen monetary policy by cutting the target for the federal funds rate eleven times over the span of eleven months. The net result has been a dramatic decline in the federal funds rate from 6.52 percent in the third quarter of 2000 to 3.50 percent by the third quarter of 2001 (*see Figure 18*). Since the third quarter of 2001 ended, the FOMC met in October and lowered the federal funds rate yet another 50 basis points to 2.5 percent, followed by another 50 basis point cut on November 6 to 2.0 percent, which represented the tenth and eleventh cuts. Since the third quarter of 2001, the FOMC lowered the federal funds rate to 2.5 percent in October, 2.0 percent in November, and 1.75 percent in December, which represented the ninth, tenth, and eleventh cuts in 12 months. Unless the Fed acts again in December, this will translate into 2.01 percent for the fourth quarter of 2001. Ironically, the Fed's rate-slashing came quick on the heels of an aggressive tightening of monetary policy that translated into six hikes in short-term interest rates over an 11-month period ending in May 2000. Those moves were purportedly carried out to stem what the Fed saw as unexpectedly high growth and increasingly tight labor markets that were fueling inflation, the cumulative impact of which was to raise short-term interest rates to 6.52 percent by the third quarter of 2000.

Figure 17
Employment Cost Index
United States, 1997-2001
Source: U.S. Bureau of Labor Statistics

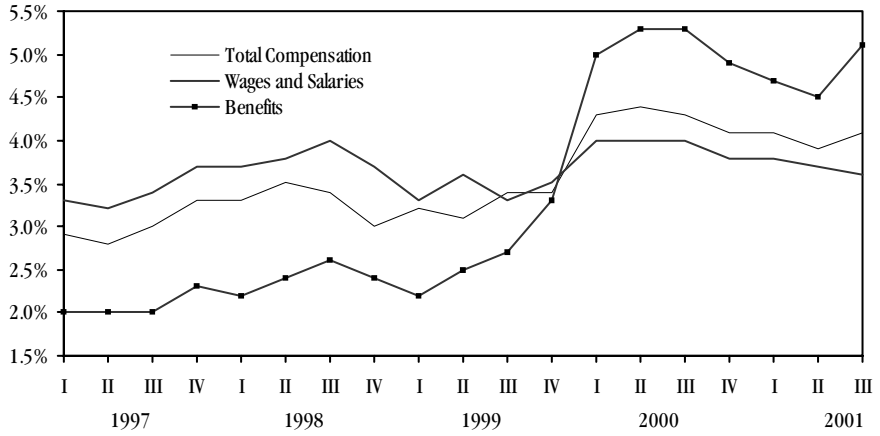
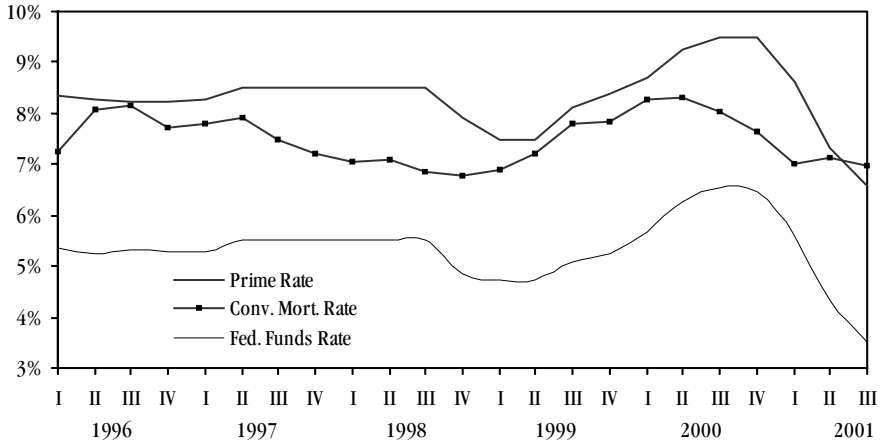


Figure 18
Interest Rates
United States, 1996-2001
Average Quarterly Percentage Points
Source: Federal Reserve Bank

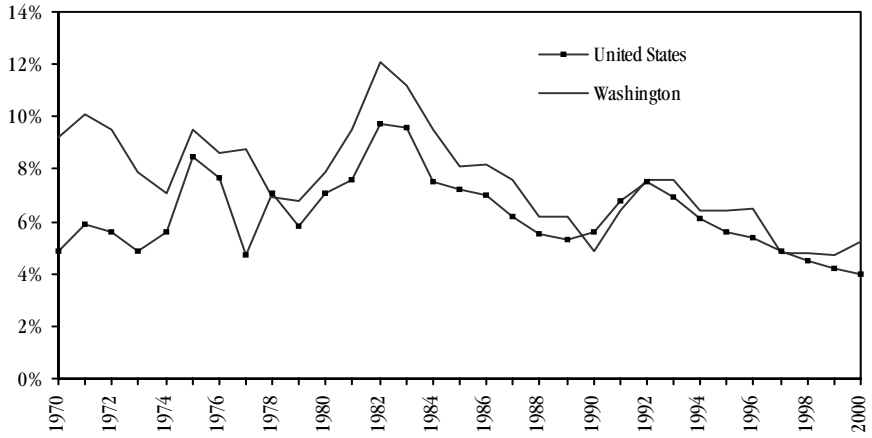


Unemployment and Its Dimensions

State and National Unemployment Rates

Washington's annual average unemployment rate began falling in the latter half of the 1980s to where by the end of the 1990s it had effectively closed the gap that had existed between it and the national unemployment rate. Moreover, the three consecutive years of unemployment below 5 percent from 1997-99 was astounding for Washington. Only once did the state achieve a similar feat and that was during the Korean War (1951-53). This was quite a departure from the past when Washington's jobless rate was as much as four percentage points higher than the national rate during, for example, the 1970s. During the 1990s, though, the state-national difference tightened as extensive restructuring and efficiency gains in key Washington industries, aggressive use of temporary help, and the shift to a more service-based economy met up with strong job growth and a tight labor market to drive down the state's jobless rate. The latter, in particular, was driven by slower labor force growth as the *birth dearth* cohort moved through the labor market and as in-migration slowed. Though it remained historically low, Washington's unemployment rate began climbing again in 2000 while the U.S. jobless rate continued falling, the net result of which was a widening gap (*see Figure 19*). This pattern continued at a heightened level in 2001.

Figure 19
Unemployment Rates
Washington and United States, 1970-2000
Source: Employment Security Department, LMEA



Washington's Monthly Unemployment Rates

As alluded to above, with the exception of January, Washington's monthly unemployment rates were higher in 2001 than they were in 2000 when viewed on a month by month basis (*see Figure 20*). This month-to-month picture simply buttresses the points made with respect to the annual trend—that Washington's labor market situation deteriorated in 2001. This is a shift from the situation in 1999-2000 when the state's unemployment rate was sustained by a relatively healthy economy and slower labor force growth.

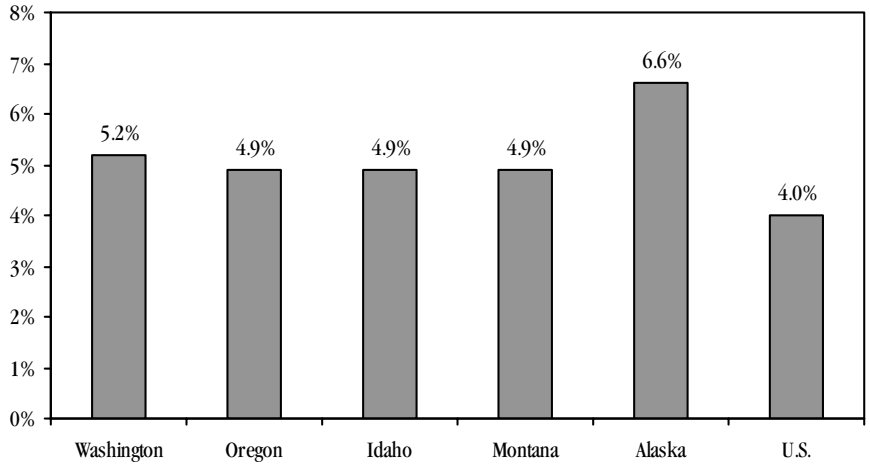
Figure 20
Monthly Unemployment Rates, Seasonally Adjusted
Washington and United States, 2000 and 2001
Source: Employment Security Dept., LMEA, and U.S. Department of Labor, BLS

2000	WA	U.S.	2001	WA	U.S.
January	5.0%	4.0%	January	4.9%	4.2%
February	5.2%	4.1%	February	5.5%	4.2%
March	5.2%	4.0%	March	5.8%	4.3%
April	5.2%	4.0%	April	5.6%	4.5%
May	5.2%	4.1%	May	5.5%	4.4%
June	5.2%	4.0%	June	6.0%	4.5%
July	5.3%	4.0%	July	5.8%	4.5%
August	5.3%	4.1%	August	6.0%	4.9%
September	5.1%	3.9%	September	6.1%	4.9%
October	5.2%	3.9%	October	6.6%	5.4%
November	5.1%	4.0%	November	n/a	n/a
December	5.0%	4.0%	December	n/a	n/a

Northwest Unemployment Rates

In climbing from 4.7 percent to 5.2 percent, Washington's unemployment rate went from the lowest among Northwest states in 1999 to the second highest in 2000 (*see Figure 21*). Washington's unemployment rate movement in 2000 was atypical as Oregon, Idaho, and Montana all saw their jobless rates decline along with that of the nation. In fact, Washington's jobless rate essentially traded places with those in Idaho and Montana with each residing in 2000 where the other stood in 1999. Alaska, though, saw its jobless rate increase to 6.6 percent. Jobless rates among the Northwest states, including Washington, were above the 4.0 percent national average.

Figure 21
Unemployment Rates
Northwest States and United States, 2000
Source: Employment Security Dept., LMEA, and U.S. Department of Labor, BLS

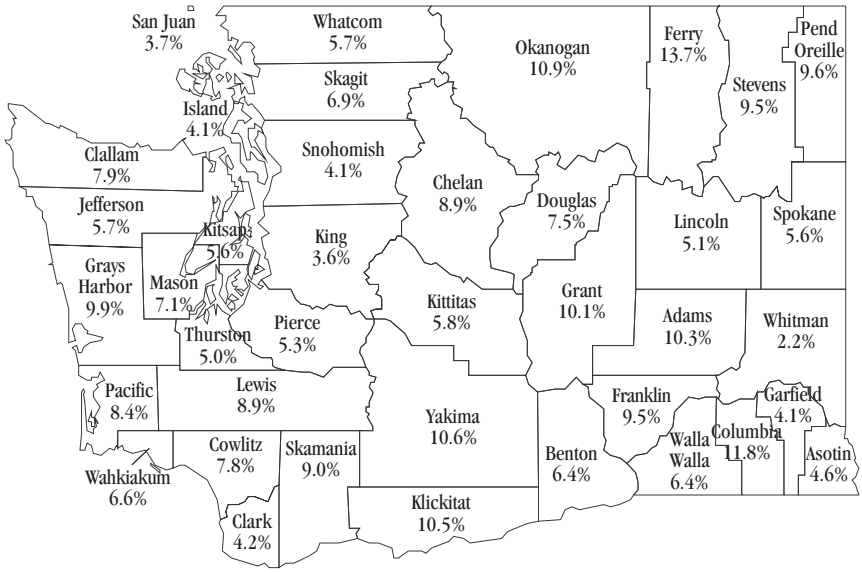


Unemployment Rates by County and Region

In 2000, tight labor markets continued to affect the Puget Sound region with those counties boasting some of the lowest unemployment rates in Washington (*see Figure 22*). King, Snohomish, and Island counties (also known as the Seattle-Bellevue-Everett PMSA) had jobless rates in roughly the 3.5 percent to 4.0 percent range with Pierce and Thurston counties around 5.0 percent. Equally low was southwest Washington's Clark County at 4.2 percent. Low jobless rates were also posted, however, by some of the state's small, rural counties. Southeast Washington led the way with Whitman County at 2.2 percent—the lowest jobless rate in the state—and Asotin and Garfield counties not far behind. So as not to leave the impression that labor markets were tight everywhere in the state, a handful of counties had unemployment rates in double digits. Ferry County had the highest jobless rate in the state at 13.7 percent followed by Columbia, Okanogan, Yakima, Klickitat, Adams, and Grant counties and their jobless rates above 10 percent.

It is interesting to note, however, that unemployment rates in Puget Sound, western Washington, and urban Washington, though still lower than their counterparts in non-Puget Sound, eastern Washington, and rural Washington, climbed from 1999 to 2000 whereas they fell among their counterparts (*see Figure 23*). This suggests that while the less diverse, heavily resource-based economies in non-Puget Sound, eastern Washington, and

Figure 22
Unemployment Rates by County
Washington, 2000
Source: Employment Security Department



rural Washington continue to spike above their counterparts in terms of area joblessness, the recent rise in statewide unemployment was driven largely by trends in Puget Sound, western Washington, and urban Washington. In other words, the *Two Washingtons* are still an issue, but the situation was not exacerbated in 2000 as the state's economy slowed.

Discouraged Workers

The Bureau of Labor Statistics defines discouraged as all individuals who want a job, but did not look for work in the prior four weeks because they (1) did not believe a job was available in their line of work or area, (2) had not been able to find work previously, (3) lacked the necessary schooling, training, skills, and experience, (4) were considered too young or old for the job or (5) experienced other forms of discrimination.

By this definition, the count of discouraged workers nationally has declined each year since 1994 (*see Figure 24*). From an estimated 500,000 in 1994, the number of discouraged workers has fallen year after year to 260,000 in 2000. While this represents an annual rate of decline of more than 10 percent over the 1994-2000 period, the number of discouraged workers fell 5 percent in 2000. This is consistent with a healthy national economy that has seen its jobless rate decline, but at a slower pace over the past several years. That having been said, there are signs that the national economy will have peaked in 2001. Against this backdrop, it is unlikely that the number of discouraged workers will continue to decline at a significant rate. In fact, it is possible that the number will reveal an increase in 2001 or 2002.

Figure 23
Unemployment Rates by Region
Washington, 1999 and 2000
Source: Employment Security Department, LMEA

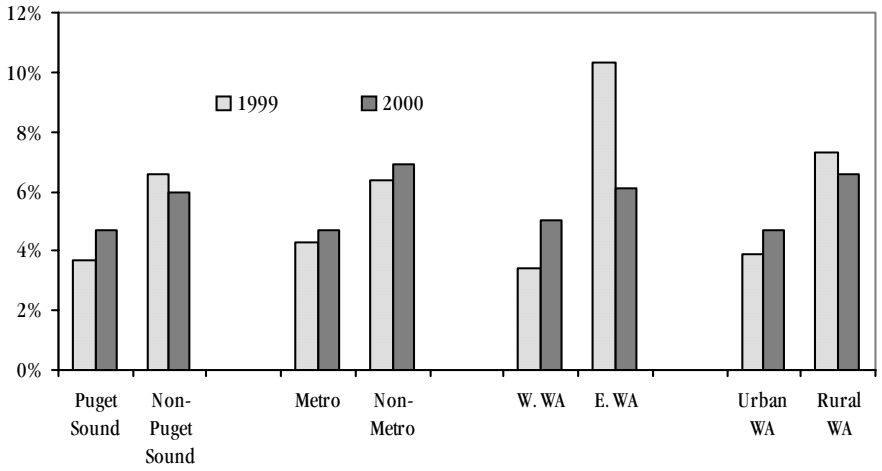
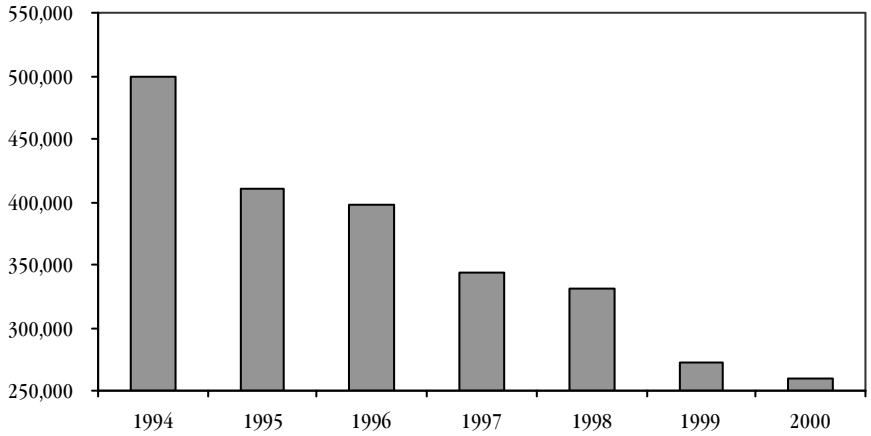


Figure 24
Discouraged Workers
United States, 1994-2000
Source: U.S. Department of Labor, BLS



Seasonal, Cyclical, and Structural Employment

Seasonality, cyclicality, and structural maturity are important to any discussion of employment because they tend to foster higher than average unemployment in the industries within which they are present. This is historically the case in Washington, whose industry mix relies heavily on agriculture, natural resource, and goods-producing industries. As a result, a significant share of workers are viewed as being at risk of longer and more frequent episodes of unemployment, and Washington's jobless rates have traditionally been higher and more volatile than those nationally as a result.

Seasonality reflects regular monthly swings in labor market activity. These swings produce atypically high employment or unemployment depending on the time of year. Workers in affected industries are hired at the start of and released at the end of, for example, the crop harvest or logging season, the school year, the summer tourist or winter ski season, etc. Complementary and support industries also tend to be affected.

Cyclicality reflects shifts in the business cycle. Business cycles generate disproportionately high employment or unemployment depending on where an economy is in the cycle, namely whether it is in expansion or contraction. Turning points in the cycle are brought about by factors that influence supply and demand. For example, recessionary pressures are often brought to bear by softening demand that squeezes revenue and forces cost-cutting which, in turn, increases the likelihood of payroll reductions.

Structural maturity reflects long-range upward shifts in productivity. Shifts of this nature typically result in unemployment as affected firms introduce new equipment, processes, and technology to heighten their competitive positions and overall productivity, and replace jobs as those gains are realized. Structural pressures are also brought to bear by shifts in consumer buying patterns, which can render certain goods and services, and by extension the industries that produce them, obsolete.

How It Is Triggered

In 1986, the state legislature's Joint Select Committee on Unemployment Insurance and Compensation developed criteria for identifying seasonal, cyclical, and structural industries. The criteria were applied to three-digit Standard Industrial Classification code private covered employment data from the Employment Security Department. While the formulas are virtually unchanged, the observation period has been moved from 1976-84 to 1982-90 to more accurately reflect the state's current employment composition as well as to measure the state's job performance during the most recent national economic recession.

An industry was classified as seasonal if its highest to lowest monthly employment varied 18.9 percent or more from its annual average estimate using 2000 as the reference year. Cyclicality was acknowledged if an industry's highest to lowest annual average employment varied 24 percent or more from the midpoint trend line from 1982-90. This formula was run in addition to the official threshold of 37.8 percent from the midpoint trend line from 1976-84 to capture the aircraft and parts sector, whose degree of cyclicality fell from an initial 37.8 percent to 24.0 percent from the 1976-84 business cycle to the 1982-90 business cycle. Structural industries were identified as Type 1 if employment decreased less than 10 percent from the pre-recession peak in 1990 or Type 2 if the loss was 10 percent or more from that 1990 peak.

Seasonal Industries

Washington had 113 three-digit SIC coded industries designated as *seasonal* in 2000. Those 113 sectors employed 316,729 workers who, in turn, represented about 14 percent of the state's total private covered employment in 2000.

Private covered employment encompassed by Washington's seasonal industries has fluctuated over time (*see Figure 25*). The most recent data, however, show that total private covered seasonal employment in Washington fell nearly 23 percent in 2000 after declining nearly 6 percent and 13 percent, respectively, in 1999 and 1998. A declining seasonal employment share does not always mean lessening seasonality since the state's overall employment base can be contracting as well. That was not the case over the 1998-2000 period, however, as seasonality as a share of total private covered employment has fallen more than ten percentage points from 24.3 percent in 1997 in an expanding economy. Altogether, this suggests that Washington's economy continued a trend of lessening seasonality that was established over the past couple of years.

Washington's economy may have become less seasonal in 2000, but the ranking of the largest 3-digit SIC coded seasonal industries remained essentially the same (*see Figure 26)*. The list included department stores, miscellaneous shopping goods stores, and womens' clothing stores, all of which do a lot of summer and holiday-related hiring. Agriculture-related sectors, namely fruits and tree nuts, preserved fruits and vegetables, and crop services made the list reflecting harvest cycles. Landscape and horticultural services similarly made the list. Hotels and motels as well as amusement and recreation services appear on the list due to swings generated by summer and winter tourism-related activities. Construction, particularly heavy construction, also appeared thanks to its weather-regulated activities.

Perhaps most noteworthy is the fact that personnel supply services (largely consisting of temporary workers) fell off the list. This sector has traditionally been driven by summer and holiday-related hiring. It still is, but that aspect of the industry has been more than offset by its ever-increasing role as a provider of year-round, non-seasonal hires as well. This shift has been pervasive to the extent that traditional seasonal gyrations have been muted by the overall stability of hiring over the year.

Figure 25
Seasonal Private Covered Employment
Washington, 1988-2000
Source: Employment Security Department, LMEA

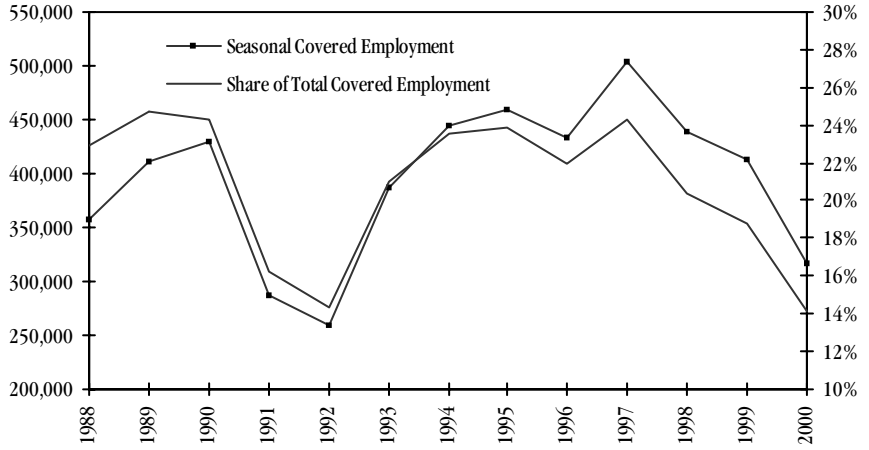


Figure 26
Largest Seasonal Industries in Washington, 2000
Source: Employment Security Department

SIC	Industry	Employment
531	Department Stores	47,453
881	Private Households	37,011
017	Fruits and Tree Nuts	35,442
701	Hotels and Motels	26,986
594	Miscellaneous Shopping Goods Stores	26,367
203	Preserved Fruits and Vegetables	13,799
078	Landscape and Horticultural Services	10,733
072	Crop Services	7,383
172	Painting and Paper Hanging	6,796
821	Elementary and Secondary Schools	6,214
161	Highway and Street Construction	5,904
018	Horticultural Specialties	5,533
177	Concrete Work	5,443
562	Women's Clothing Stores	3,812
729	Miscellaneous Personal Services	3,578

Cyclical Industries

Under the official 37.8 percent variance threshold, Washington had 129 three-digit SIC coded industries and nearly 315,469 workers identified as *cyclical* in 2000 which accounted for 14 percent of the state's total private covered employment. Though private covered cyclical employment has grown each year from 1988-2000 —no surprise given that the state has been on the upside of the business cycle—its share of total private covered employment has held relatively steady over the period at 13 percent to 14 percent.

Under the "adjusted" 24 percent variance threshold, Washington's economy had 198 three-digit SIC code sectors and 654,012 workers identified as cyclical in 2000, which translated into 29 percent of the state's total private covered employment.

One indication that some cyclicality is being washed out of Washington's economy is the fact that aircraft and parts employment—often cited as a key cyclical sector—varied only 24 percent from its midpoint trend line during the 1982-90 business cycle compared to 37.8 percent during the 1976-82 cycle. In other words, aerospace employment did not swing or fluctuate as widely as it used to. It was less cyclical.

A list of the largest three-digit SIC coded cyclical industries at that 37.8 percent threshold in 2000 is topped by miscellaneous business services which, though a catch-all for business services, is heavily skewed toward security services (*see Figure 27)*. Security services have become a fast-growing part of the economy thanks to our security-conscious society and the fact that most firms outsource this

function. Moreover, its sector will expand even further in the post-September 11 environment. Accounting, auditing and bookkeeping, management and public relations, and sanitary services are other business-related functions that are also traditionally outsourced and which have also grown during this current expansion period. The list also includes a number of interest rate-sensitive sectors like mortgage bankers and brokers, savings institutions, engineering and architectural services, research and testing. Also included are wholesale trade sectors like machinery, equipment and supplies and professional and commercial equipment which are also interest rate sensitive. The absence of aircraft and parts from this list is not an oversight; it does not appear on the "official" list, which uses 37.8 percent employment variance as a threshold. It would, however, top the list that uses 24 percent as its threshold.

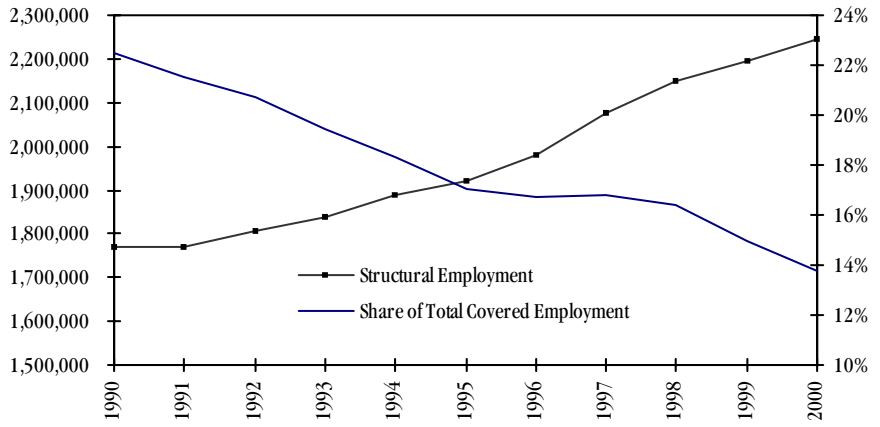
Figure 27
Largest Cyclical Industries in Washington, 2000
Source: Employment Security Department

SIC	Industry	Employment
738	Miscellaneous Business Services	28,343
871	Engineering & Architectural Services	24,777
832	Individual and Family Services	20,128
504	Professional & Commercial Equipment	19,846
508	Machinery, Equipment, and Supplies	18,068
873	Research and Testing Services	16,732
874	Management and Public Relations	13,619
872	Accounting, Auditing, & Bookkeeping	12,595
495	Sanitary Services	10,212
308	Miscellaneous Plastics Products, NEC	9,237
603	Savings Institutions	9,173
808	Home Health Care Services	7,257
616	Mortgage Bankers and Brokers	6,468
606	Credit Unions	6,436
735	Misc. Equipment Rental & Leasing	6,059
509	Miscellaneous Durable Goods	5,993
472	Passenger Transportation Arrangement	5,918
449	Water Transportation Services	5,342
473	Freight Transportation Arrangement	5,226
484	Cable and Other Pay TV Services	4,423

Structurally Mature Industries

Washington had 124 three-digit SIC coded industries classified as *structurally mature* in 2000 and those 124 sectors employed nearly 309,993 private covered workers. Remember there are two distinct categories of restructuring—Type 1 and Type 2. Type 1 (employment decline of less than 10 percent) captured 62 sectors and 90,717 private covered workers, while Type 2 (employment decline of 10 percent or more) captured 93 sectors and 219,276 workers. Clearly, the biggest shift from 1999 to 2000 was in the number of three-digit SIC coded sectors that fell into either the Type 1 or Type 2 categories. The number of Type 1 SICs fell by a third while the number of Type 2 SICs tripled. This suggests a heightening or at least broadening in the range of industry sectors being affected by restructuring compared to the year previous, which did not translate, though, into an increase in the number of workers encompassed by either the Type 1 or Type 2 categories. Additionally, Type 2 encompassed a greater number of private covered workers than Type 1, not too surprising given the degree of decline necessary to fall into one or the other category.

Figure 28
Structurally Mature Private Covered Employment
Washington, 1990-2000
Source: Employment Security Department, LMEA



The trend for structurally mature industries in Washington had been one of relative decline since the 1991 recession (*see Figure 28*), which is consistent with what one should expect in restructuring industries—that employment levels after restructuring are lower even against the backdrop of overall statewide employment growth. Employment declines in the state's structurally mature industries essentially played out in 1995, however, and the trend has been relatively flat since. Indeed, along with the 5.4 percent decline in the number of covered workers in structural industries in 2000 (with the

greatest share of that decline coming from Type 2), it fell a percentage point to 13.8 percent as a share of total private covered employment. Rather, both rose at roughly the same rate.

One point that bears repeating is that there is considerable overlap between industries categorized as structurally-mature and cyclical. What results is an employment pattern in which the former generally resembles the latter. However, the greater presence of nonmanufacturing industries in the structurally-mature category produces a much smoother employment trend with less severe peaks and troughs. Nevertheless, 1990 was still the peak for the structurally-mature category and employment among the sectors classified as such has declined at annual rates of 2.5 percent or more in the proceeding five years.

The list of the largest structurally maturing sectors in Washington in terms of covered employment has not changed much over the decade (*see Figure 29*). Not surprisingly, the listing of the largest three-digit SIC coded structurally-mature industries is topped by aircraft and parts, a sector that has very definitely been affected by restructuring over the past several years. Several other industries typically associated with restructuring also appear on the list. Trucking has been restructuring in the wake of deregulation. Commercial banks and insurance have been consolidating nationally as well as regionally throughout the 1990s. A lot of news coverage was dedicated to the high-tech meltdown, which included computer equipment. Much has also been reported on restructuring in the forest products industry as reflected in the presence of logging; sawmills and planing mills; millwork, plywood and structural members; and paper mills. Other major manufacturing sectors whose restructuring activities are well documented include ship and boat building and repairing, newspapers, radio and television broadcasting, and primary nonferrous metals (chiefly aluminum). Water transportation and freight transportation arrangement (also known as freight forwarding) have been hit hard by the weak Asian economy and its impact on import and export activity. Specialty drug stores, women's clothing stores, and regional bakeries have faced increased competition from "big box" retailers, which accounts for their presence on the list. Miscellaneous repair shops, for their part, have been caught in a "throw-away" society where replacing consumer goods is often less costly than repairing them.

Figure 29
Largest Structural Industries in Washington, 2000
Source: Employment Security Department, LMEA

SIC	Industry	Employment
372	Aircraft and Parts	86,153
602	Commercial Banks	20,779
242	Sawmills and Planing Mills	12,884
591	Drug Stores and Proprietary Stores	11,482
271	Newspapers	10,153
243	Millwork, Plywood & Structural Members	9,380
262	Paper Mills	7,548
373	Ship and Boat Building and Repairing	7,225
241	Logging	6,606
357	Computer and Office Equipment	6,189
721	Laundry, Cleaning, & Garment Services	6,144
333	Primary Nonferrous Metals	5,549
382	Measuring and Controlling Devices	5,472
449	Water Transportation Services	5,340
473	Freight Transportation Arrangement	5,226
769	Miscellaneous Repair Shops	4,739
483	Radio and Television Broadcasting	4,400
562	Women's Clothing Stores	3,812
546	Retail Bakeries	3,338
016	Vegetables and Melons	3,159

Regional Patterns

Every county has some degree of seasonal, cyclical, and structural covered employment. As a general rule, though, the highest shares of the three factors can be found in small, non-metro counties with resource-based economies. The larger metropolitan counties, however strong their resource-based employment might be, tend to have more diversified economies that dilute or offset the seasonal, cyclical, and structural components.

Seasonality. The degree of seasonality among Washington counties in 2000 ranged from a low of 9.4 percent in Snohomish County to a high of 56.2 percent in Adams County (*see Figure 30*). Not surprisingly, the highest degrees of seasonality—those constituting more than one-fourth of an area's covered employment— were found in roughly a third of Washington's counties, most of them agriculture-based counties in central and eastern Washington. At the highest end, Adams, Columbia, Douglas, and Grant counties have more than half of their respective covered employment classified in seasonal industries.

Areas with seasonal employment shares from roughly 20 percent to 25 percent included a mix of counties with agriculture-based and forest products-based economies. This essentially accounted for the balance of non-metropolitan counties in central and eastern Washington as well as most of the non-metropolitan counties in western Washington.

Generally speaking, Washington's metropolitan areas were among the counties with the lowest shares of seasonal employment. Yakima and the Tri-Cities were, of course, exceptions with their respective 36.1 percent and 28.6 percent shares driven by agriculture despite their metropolitan labels. It is worth noting, though, that even the other metropolitan counties found 10 percent to 15 percent of their covered employment in seasonal industries.

Cyclicality. Cyclicality was less present in Washington counties than either seasonality or structural maturity in 2000 (*see Figure 31*). The degree of cyclicality among Washington counties ranged from a low of 3.9 percent in Ferry County to a high of 30.9 percent in Benton County. Immediately following Benton County were Garfield and Lincoln counties with cyclical shares of 24.9 percent and 24.8 percent, respectively. Nevertheless, few geographic or industrial patterns seem to stand out. It should be noted, however, that the larger metropolitan areas appeared to have driven the 14 percent state average.

Structural-Maturity. Like seasonality, structural maturation left its mark on Washington counties in 2000 (*see Figure 32*). In terms of share of total private covered employment, the impact ranged from a low of 5.5 percent in Douglas County to a high of 49.0 percent in Wahkiakum County. The most impacted counties—those with structural shares of 25 percent or more —were largely in the northeast, southwest and Olympic Peninsula regions of the state. That is, they tended to be smaller, rural and natural resource-dependent. This is consistent with the makeup of many of the industries that have experienced restructuring since 1990. At the same time, structural maturity was more present at the spectrum of counties than was either seasonality or cyclicality. This reveals the more random or haphazard nature of structural maturity, which strikes firms and industries in a less than predictable fashion.

Figure 30
Seasonal Jobs as a Share of Total Private Covered Employment
Washington, 2000
Source: Employment Security Department, LMEA

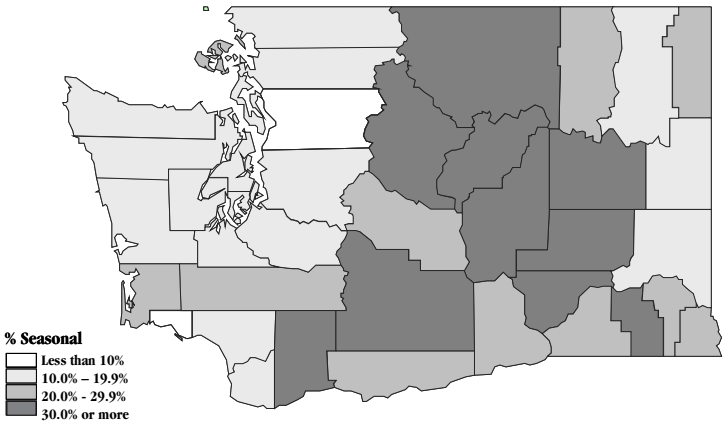


Figure 31
Cyclical Jobs as a Share of Total Private Covered Employment
Washington, 2000
Source: Employment Security Department, LMEA

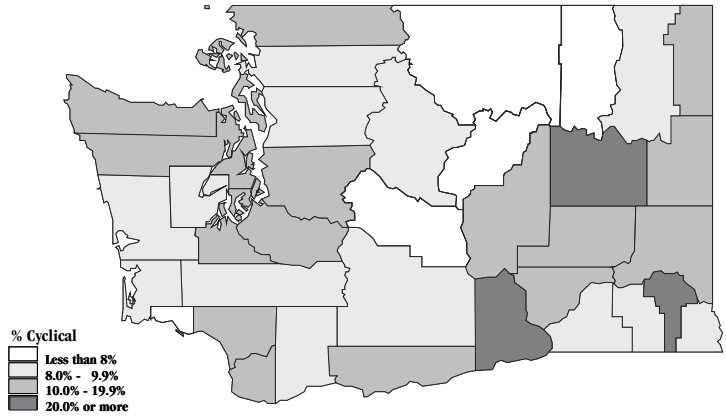
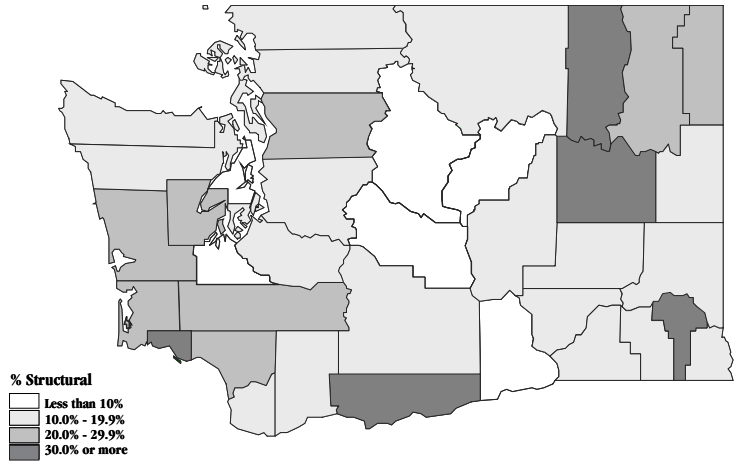


Figure 32
Structural Jobs as a Share of Total Private Covered Employment
Washington, 2000
Source: Employment Security Department, LMEA



Labor Force and Employment Forecast

Labor Force Forecast

The long-term forecast for Washington's labor force (those 16 years of age and older who are either working for pay or actively looking for work) is expected to be characterized by progressively lower annual rates of growth (*see Figure 33*). For example, growth is projected at an annual rate of 1.4 percent for the current decade (2000-10), which is considerably lower than the 2.0 percent annual rate recorded for 1990-2000. The state's labor force growth rate for 2010-20 is, in turn, expected to be lower than that in either of the two decades preceding it at 0.8 percent annual growth. These are some of the lowest growth rates in the modern era, though they still outpace the national norm. Continued in-migration will supply prospective new workers needed to boost the state's trend above the national average. Broader demographic shifts, however, will put a damper on overall state and national labor force growth rates as the baby boom generation hits the traditional retirement age of 65 en masse around 2010.

Labor force participation rates in Washington have historically been higher than the national average due largely to the higher concentration of young people in the labor force. From 1970-95, the state's labor force participation rate increased from 61.5 percent to 68.6 percent as declining male labor force participation rates were more than offset by increasing female labor force participation rates. It is expected to peak in 2005 at 69.5 percent—higher, though not altogether removed from the 69.3 percent recorded in 2000. It is projected to progressively slip to 64.4 percent by 2025 (*see Figure 34*).

Figure 33
Labor Force Growth Rates, Actual and Projected
Washington State, 1950-2020
Source: Employment Security Departemnt & Office of Financial Management

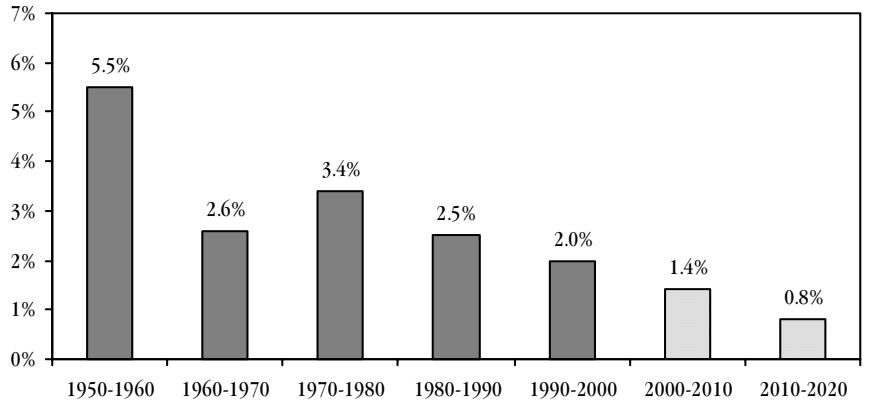
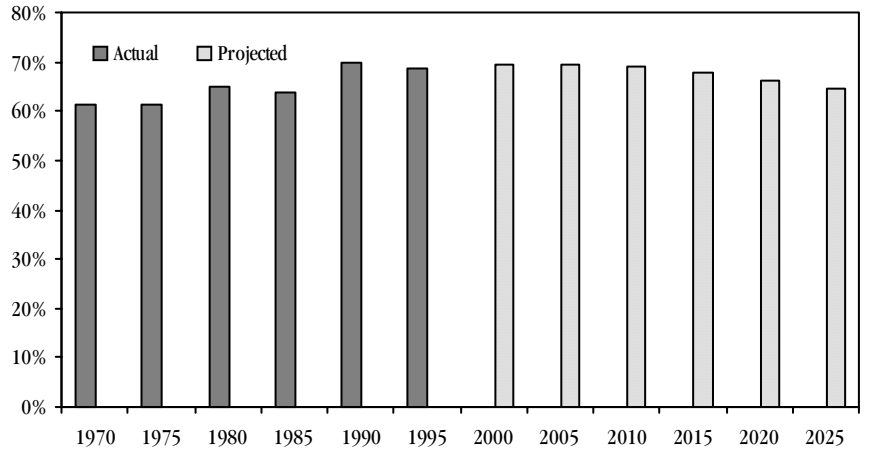


Figure 34
Labor Force Participation Rates, Actual and Projected
Washington State, 1970-2025
Source: Employment Security Department & Office of Financial Management



The projected decline in labor force participation from 2005-2025 is based on anticipated changes in age structure of the state population. Basically, labor force participation is highest between 20-54, it is somewhat lower for 16-19 and 55-64, and it is very low for persons 65 and older. Population growth that occurs in age groups with low labor force participation (e.g., 65+) will not increase the labor force as much as the growth in high-participation age groups (e.g., 35-44). Against this backdrop, those 65 and older will see their share of Washington's population increase

substantially from 2010 to 2025, dampening labor force growth.

Washington's labor force is also expected to become more racially diverse over the long-term forecast period (*see Figure 35*). Non-whites are projected to increase their share of the state's labor force from 8.5 percent in 1990 to 12.2 percent in 2000 to 15.2 percent by 2020. Conversely, the white share of the state's labor force is expected to fall proportionately over the period. These gains in labor force share will be evident among all non-white groups in Washington from 2000-20 as their combined labor force grows at an annual rate of 2.3 percent, compared to the 1.0 percent and 1.2 percent annual rates for the white and the total labor force, respectively. As a result, non-white workers will account for 26.9 percent of the net labor force growth in the state from 2000-20. The main reason for the increased share of non-whites in the labor force is that the non-white population is expected to grow at a much higher rate than the white population. A second factor is the younger age composition of the non-white population compared to whites. Non-whites are also expected to continue increasing their labor force participation rate. Another important state and national labor force trend is ethnic diversification, namely with respect to Hispanics. From 1990-2020, the state's Hispanic labor force will have more than tripled, raising their labor force share from 3.7 percent in 1990 to 8.7 percent by 2020.

Figure 35
Labor Force Composition by Race
Washington, 1990-2000
Source: Employment Security Department & Office of Financial Management

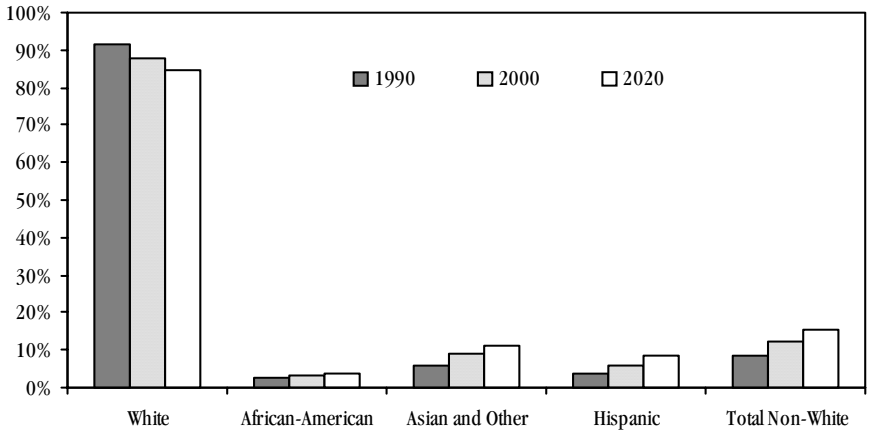
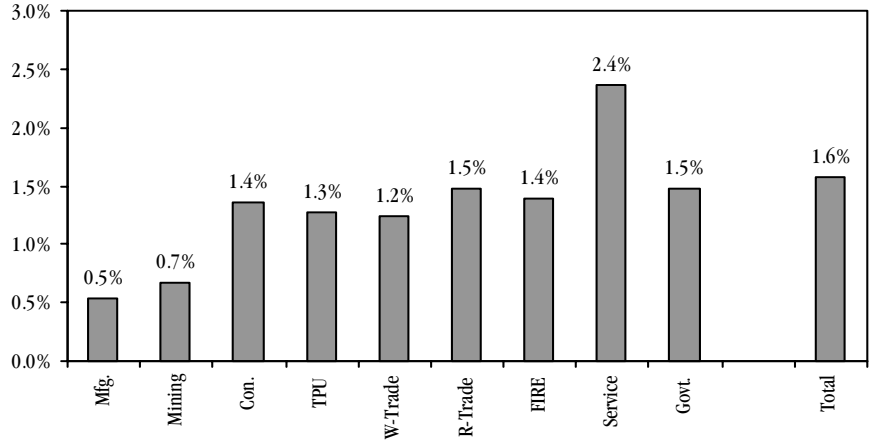


Figure 36
Nonagricultural Employment Growth Rates by Major Industry
Washington, 2000-2008
Source: Employment Security Department & Office of Financial Management



Industry Employment Forecast

Washington's nonagricultural employment base is projected to grow at an annual rate of 1.6 percent from 2000-2008 (*see Figure 36*). Meanwhile, the state's short-term industry forecast reveals some of the variance in growth rates that gets lost in the aggregated nonfarm employment forecast. In particular, the outlook for Washington's goods-producing sectors (mining, construction and manufacturing) presents a mixed bag with rates shy of the total nonfarm employment growth expected to be posted over the 2000-2008 period. Manufacturing is projected to see especially modest annual growth of 0.5 percent over the period. The same can be said for mining at 0.7 percent, though it is admittedly a fairly small sector. Construction is expected to fare somewhat better at 1.4 percent. On the services-producing side, services itself is expected to be far and away the strongest industry sector over the 2000-2008 forecast period at 2.4 percent annual growth. The balance of services-producing sectors is projected to generate jobs at rates ranging from 1.2 percent to 1.5 percent per annum over the eight-year period.

Manufacturing. Nationally, manufacturing is expected to experience declining employment over the forecast period. In Washington, however, manufacturing will remain a net positive contributor as continued productivity-related capital investments both nationally and internationally generate demand for Washington goods and as demand for the state's natural resources picks up both nationally and internationally. However, internal efficiencies and technological changes leading to productivity gains will hold employment in check. Some of the productivity gains will be driven by increased global competi-

tion, while others will be driven by the need to adapt to slower growth in the labor force and, in some cases, raw resource scarcity.

Lumber and Wood Products. Lumber and wood products employment is expected to decline in both absolute and relative terms through the forecast period as increased mechanization and newer logging and milling technology decrease labor demand. It is also expected that lumber and wood products employment will continue to be affected by environmental constraints over the forecast period. These pressures are likely to force accelerated investment in resource-saving and labor-saving technology. Higher material costs and competition from both Canadian lumber manufacturers and alternative building materials (e.g., composites) will place added emphasis on offsetting internal efficiencies including wages and benefits. These factors all point to a constrained demand for labor.

Paper and Allied Products. Many of the same forces that affect lumber and wood products affect pulp and paper, too. Environmental laws have affected processing requirements and timber-harvesting constraints have affected supply. The paper industry is, however, more flexible in acquiring raw resources as chips can be imported and paper can be recycled. Competition from Asia and Canada will dampen future growth in the state's industry, but environmental demands may accelerate investment in resource-saving and pollution abatement technologies, which will enhance the industry's long-term viability.

Aerospace. Short-term outlook for the aerospace industry is poor. After emerging from a major restructuring at the start of 2001, Boeing appeared to be ramping up employment slowly but surely in response to modestly rising orders for commercial aircraft. The company's major airline customers, however, were experiencing weak passenger traffic and lack of profitability. After the terrorist attacks of September 11, the already weak airlines saw business evaporate and began canceling orders and options on future airplanes and postponing delivery of already-produced airplanes. This cemented Boeing's decision to effect a major layoff that will cut at least 30,000 workers by mid-2002. This will impact Boeing's network of aerospace-related subcontractors across the state as well. Given the overall state of the global economy and the new security environment facing air travelers, commercial aircraft orders are not expected to recover until at least midway through the forecast period, and then only cautiously.

Ships, Boats, and Motor Vehicles. Washington's transportation equipment sector other than aerospace consists of ships, boats, and motor vehicles (primarily heavy trucks and trailers). Construction of state ferries in the past few years represented a major revenue source for Washington's shipbuilding industry. The passage of I-695 resulted in the curtailment of state ferry system services and new vessels. Fortunately, spin-off from the Navy's Everett Homeport is generating substantial overhaul and maintenance work now for local shipyards. Luxury yachts and other pleasure craft have seen healthy business growth in the past decade and can be expected to move in tandem with the general economy. Though sales of heavy trucks and trailers is currently slow, they can be expected to increase over time with the growth in capital investment at home and abroad.

Primary Metals. Washington's primary metals industry is dominated by aluminum smelting and refining. The availability of cheap, abundant, and reliable electricity was a key factor in siting aluminum facilities here (energy represents a third of aluminum production costs), but the cost and availability now represents a major uncertainty. As a result, virtually all aluminum smelting operations in Washington are furloughed, some temporarily, others permanently. Aluminum producers are seeing more competition for electricity from residential, commercial, and other manufacturing consumers and this will continue unabated. The pressure of growing foreign competition and rising energy costs, coupled with the low price for aluminum ingots on the world market, raises questions about the industry's ability to restart anytime sooner than two years from now. At that time, it is likely that the industry, if it restarts, will do so with fewer workers.

Machinery and Instruments. Growth of Washington's machinery and instruments sector has been strong over the past 20 years, particularly in electronics and scientific and medical instruments. The ongoing restructuring, particularly in the semiconductor and computer peripheral sectors, has temporarily hobbled the industry. However, demand for computer hardware is expected to rebound before the end of the forecast period as business and household demand for computer technology and electronic devices returns on a cyclical basis not only domestically, but overseas as well. Non-electrical machinery production is keyed largely to farm, construction, forest products, and other heavy industries. The outlook for this sector is as bright as that of the electronics industry. Overall investment levels are expected to continue strong. At the same time, new and expanding markets in Europe, Asia, and Central and South America are strong possibilities in the long run given the trend toward greater industrialization in those economies. Over the short-run, however, the sector will have to contend with weak foreign economies beset by capital scarcity.

Food Processing. Major processed food products in Washington include frozen potatoes, apple juice, and seafood with wine, roasted coffee, and coffee products representing a growing segment. Increased mechanization, biotechnology, and computerization will characterize the industry's produc-

tion process over the long run. This will keep employment in Washington's food processing sector relatively flat even as markets for the industry's products continue to expand both domestically and internationally. Crop production will drive the industry due to the state's fruit and vegetable base with the outlook for processed fruits, vegetables, and specialty products looking favorable. Some labor market and demographic trends that will raise the demand for convenience foods include a growing number of households with two or more workers and an elderly population that is increasing at twice the rate of the general population. Foreign exports will constitute larger proportions of total sales due to the growing popularity of western style foods in the developing countries and the opening of economies in both Europe and Asia to free trade.

Construction. Construction will remain more or less volatile with short-run demand affected by interest rates, business cycles, and public works projects. Consistent with that assessment, growth in construction employment will be constrained in the front end of the forecast period as slower population and employment growth would indicate a likely slowdown in construction demand. Some of this slower growth could be offset somewhat by rising incomes and the demand they generate for larger homes and remodeling work as well as low, stable long-term interest rates and inflation that spur investment in residential and commercial building.

Transportation and Public Utilities (TPU). Telecommunications is the industry where most new products and services will be seen in the future as integration of voice, data, and video through wireline (coaxial or fiber cable) or wireless (radio systems, microwave, or satellites) networks expands. In the past few years the industry spent heavily on building and expanding infrastructure after the U.S. Telecommunication Act of 1996 removed barriers to local competition. In recent years, the deregulation of most TCU industries has resulted in higher operating efficiency and productivity gains. Costly investments in infrastructure development, however, created capitalization problems that ultimately forced players out of the market and caused employment cuts. The forecast calls for the benefits of deregulation and further technological improvements, especially in communications, to sustain the demand for TPU services and for employment to increase at a modest pace.

Wholesale Trade. Wholesale trade employment has grown at a substantially slower rate than retail trade employment over the past 30 years, reflecting the adoption of productivity-enhancing technologies and improvements in business practices such as computerization, inventory controls, and more efficient distribution and delivery systems. Productivity and management improvements are expected to continue over the forecast period. Vertical integration, as evidenced by warehouse retailing, one-stop shopping, and superstores, is expected to continue chipping away at employment growth in wholesale trade.

Retail Trade. Retail trade has increased its share of statewide nonfarm employment over the past 30 years due to increases in income and spending power, particularly as women entered the workforce and as the two-income household became common. Assumptions in the retail employment forecast, however, are that future wage increases will not match those of the 1960s and 1970s and that personal income growth will be slower over the next 25 years than was the case from 1970-95. Also, since there are already many women in the labor force, the growth of two-income households is expected to slow. Other trends in retail trade that will act to slow employment growth include increased worker productivity and economies of scale generated by warehouse superstores. The forecast calls for retail trade employment to continue to rise, but at a slower rate than in the past. Consequently, retail trade's share of total nonfarm employment over the forecast period will remain flat at around 18 percent.

Also anticipated in Washington's 1996-2020 forecast is something of a shift. Retailing is expected to expand at about the state average of 1.4 percent. However, most of the major retail subsectors (food stores, general merchandise stores, building and garden supply stores, apparel and accessory stores, auto dealers and service stations) are expected to climb only 0.8 percent to 1.0 percent per year. This is a considerable shift from the previous year's forecast when those subsectors fell into lock step with the overall retail trade average. Ultimately, employment growth in retail trade is expected to be led by eating and drinking places, which is forecast to expand at 2.0 percent per annum over the period.

Finance, Insurance, and Real Estate (FIRE). Over the forecast period, demand for FIRE services will continue to rise as Baby Boomers swell the age cohorts that save a higher proportion of their income and as the elderly populace with high asset ownership grows. FIRE employment will increase, but at a slower rate than in the past as computerization and other advances increase productivity and offset to some degree the increases in labor needed to manage the rising demand for FIRE services. Trends toward electronic banking and interstate banking are uncertainties affecting employment growth in this sector.

Services. Services has been Washington's fastest growing sector in recent years and this is expected to continue during the forecast period as traded services, including legal services, business services, engineering, management, and accounting services lead this division in the future. Growth in traded services can be attributed to factors such as the trend among businesses to increasingly contract out certain functions (e.g., legal, personnel,

advertising, data processing, security, etc.). The increasing use of temporary personnel to perform specialized tasks or to meet peak periods of demand is a prominent example of this trend. The growth of prepackaged software is another important element in the service employment forecast. The generation of jobs by Microsoft and other software development companies in Washington has helped diversify the state's employment base as well as boost the state economy. Although other services are not expected to grow as fast as traded services, they will continue to grow significantly faster than total wage and salary employment. Health services employment has experienced fast growth in the past. Future growth is expected to be above average as well due to an acute shortage of health care professionals as well as rising demand for health care services from an aging populace. On the other hand, though the aging of the population during the forecast period will fuel the demand for health services, cost pressures and the government's willingness to foot the bill could be an offsetting factor with respect to the industry's growth. Personal and repair services will probably be the weakest of the service sectors, while hotels, amusement and recreation, education, and social services will be relatively strong.

Government. Education is a major function of state and local government, which saw employment grow faster than total nonfarm employment as the Baby Boomers moved through the education system. Growth in the primary school population (5-17) began to slow in the latter half of the 1990s. That slowdown, however, came at a time when growth in the college-age population (18-22) increased, and the latter is expected to boost employment in public higher education. Initiative 728, which funneled state general funds to school districts to improve student learning, reinvigorated employment growth in public secondary education as local schools hired more teachers to reduce class size. At the same time, several factors are working to limit the growth of government employment, namely Initiative 601, which limits spending to growth in population and inflation. Initiative 695, though overturned by the courts, was adopted in spirit as the state slashed the motor vehicle excise tax and Initiative 747 capped property tax increases not put to a public vote. These will combine to significantly slow growth in state and local government growth and that is expected to continue into the future, with what growth there is favoring local government. Federal government activities such as the postal service and park service are expected to increase with population and Washington's armed forces presence is expected to remain stable.

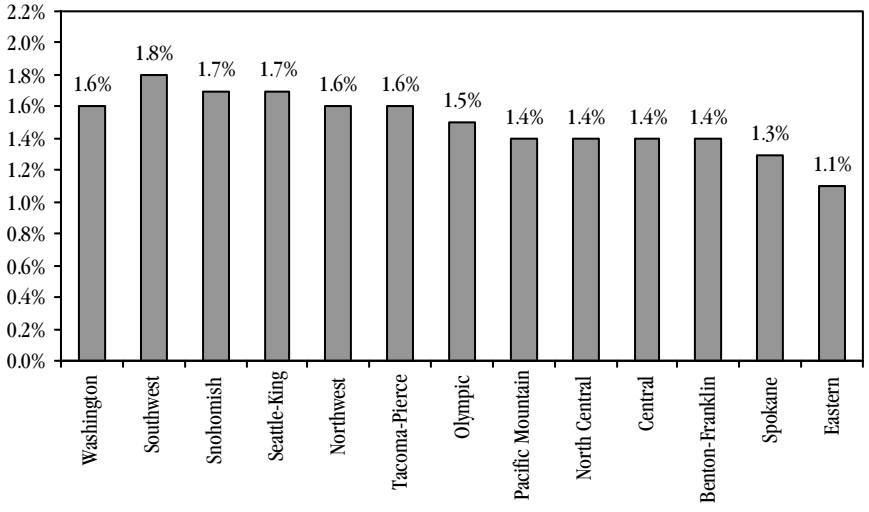
Regionally, the nonfarm industry employment projections broken down by workforce development area (WDA) show that the Southwest WDA (anchored by Clark County), Snohomish WDA, and Seattle-King County WDA are expected to outpace the state with annual growth of 1.7 percent to 1.8 percent over the 2000-2008 period (*see Figure 37*). The state's WDAs east of the Cascades are largely projected to generate more modest annual rates of growth in the range of 1.3 percent to 1.4 percent over the eight-year period, though the Eastern WDA is looking at annual growth of only 1.1 percent.

Occupational Employment Forecast

Short-term projections for Washington's major occupational divisions from 2000-2008 show that at an annual rate of 1.9 percent, the professional, para-professional, and technical grouping is expected to be the most vibrant occupational growth sector in the state (*see Figure 38*). Strong growth is also anticipated in service occupations and managerial and administrative occupations at 1.8 percent and 1.7 percent, respectively. None of the state's occupational divisions is projecting net negative change; however, agriculture, forestry, and fishing is expecting relatively modest annual growth of 0.4 percent. These projected occupational growth rates are consistent with those seen on the industry employment side; namely, that the state's economy is continuing to shift toward services-producing activities.

The fastest growing occupations can be viewed in terms of growth rates and nominal. By way of growth rates,

Figure 37
Nonfarm Annual Employment Growth Rates
Washington and Workforce Development Areas, 2000-2008
Source: Employment Security Department, LMEA



computer-related occupations were the most visibly represented among the occupations projected to be the fastest growing in Washington from 2000-2008 (*see Figure 39*). This is not terribly surprising. More specifically, computer engineers, programmers, specialists, scientists, and systems analysts are projected to post the highest growth rates in roughly the 2.5 percent to 3.5 percent range. Health-care related occupations were also well represented among the occupations expected to be the fastest growing over the 8-year forecast period with home care aides, medical and laboratory technicians, home health aides, and physical therapists topping the list.

When we examine the jobs with the largest nominal growth over the 2000-2008 period, things change a bit (*see Figure 40*). Though most of the same computer-related occupations make this list as well, it is dominated by retail and service occupations such as salepersons, cashiers, clerks, janitors and cleaners, food service workers, and waiters and waitresses. Teachers and teachers aides at the K-12 level are also projected to be in great demand. The greatest health care demand in absolute terms is expected to be for registered nurses and nursing aides, orderlies, and attendants.

An assessment of declining occupations in Washington over the 2000-2008 period reveals few surprises (*see Figures 41*). Natural resource related occupations, particularly in forest products and farming, are projected to contract at a higher than average rate of decline because of technological changes, market shifts, and changing business practices. Railroad-related occupations are also expected to decline markedly as increasing automation of and consolidation in the rail industry sap labor demand. An assortment of machine operating occupations also made the list as technological changes heighten productivity and lessen the demand for labor on the factory floor as well.

Figure 38
Occupational Employment Projections
Annual Rates, Washington, 2000-2008
Source: Employment Security Department

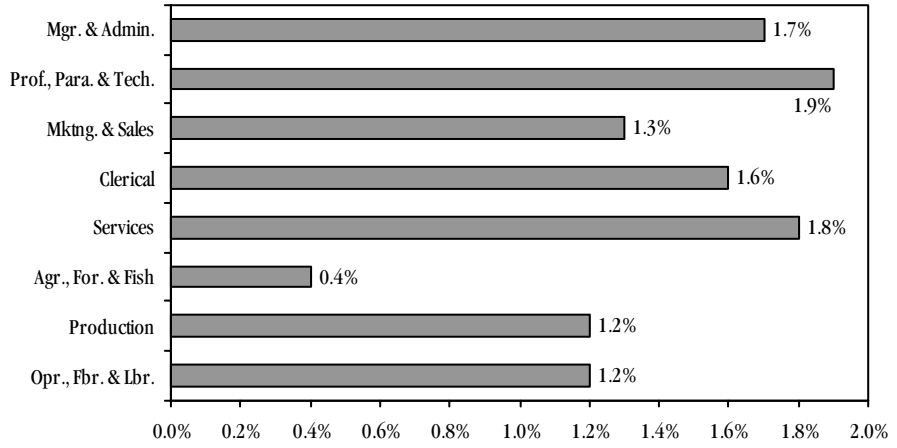


Figure 39
Fastest Growing Occupations in Washington, Annual Average Growth Rate, 2000-2008 (2000 Estimated Employment of 2,000 or more, Growth Rate of 2.3 percent or more)
Source: Employment Security Department, LMEA

Occupational Title	2000	2008	Nominal Change	Annual Percent Change
Computer Engineers, Including Software	9,861	13,128	3,267	3.6%
Computer Programmers	17,084	22,563	5,479	3.5%
Computer Support Specialists	19,824	25,565	5,741	3.2%
Technical Writers	2,916	3,723	807	3.1%
Personal/Home Care Aides	4,581	5,705	1,124	2.8%
Residential Counselors	4,044	4,985	941	2.7%
Architects, Except Landscape/Marine	3,820	4,677	857	2.6%
Systems Analysts, EDP	20,400	24,906	4,506	2.5%
Data Entry Keyers, Except Composing	8,032	9,784	1,752	2.5%
Sales Agents, Business Services	7,129	8,655	1,526	2.5%
Instructor/Coach, Sports/Physical Train	11,311	13,717	2,406	2.4%
Computer Scientists, NEC	2,739	3,313	574	2.4%
Word Processors and Typists	5,853	7,070	1,217	2.4%
Medical/Clinical Lab Technicians	3,479	4,199	720	2.4%
Social Workers, Medical/Psychiatric	5,590	6,734	1,144	2.4%
Human Service Assistants	5,864	7,057	1,193	2.3%
Home Health Aides	19,725	23,659	3,934	2.3%
Artists and Commercial Artists	9,230	11,037	1,807	2.3%
Physical Therapists	2,508	3,000	492	2.3%
Interview Clerks, Ex. Personnel/Welfare	2,889	3,451	562	2.3%

Figure 40
Fastest Growing Occupations in Washington, Annual Average Growth, 2000-2008
(Based on Annual Average Growth of 500 or More)
Source: Employment Security Department

Occupational Title	2000	2008	Annual Growth Rate	Annual Average Growth
Managers and Administrators, NEC	64,091	74,947	2.0%	1,361
Retail Salespersons	99,465	109,943	1.3%	1,310
General Managers and Top Executives	74,166	84,091	1.6%	1,239
Office Clerks, General	67,547	76,651	1.6%	1,136
Food Preparers/Service Workers, Fast Food	53,139	60,584	1.7%	929
Registered Nurses	42,477	49,851	2.0%	921
Secretaries, Except Legal or Medical	44,747	51,512	1.8%	848
Janitors and Cleaners	43,788	50,445	1.8%	830
Bookkeeping/Accounting/Auditng Clerks	55,279	61,870	1.4%	825
Waiters and Waitresses	41,364	47,332	1.7%	746
Cashiers	54,748	60,718	1.3%	745
Teachers, Elementary School	33,345	39,148	2.0%	727
Computer Support Specialists	19,824	25,565	3.2%	718
Teachers, Secondary School	31,786	37,318	2.0%	693
Computer Programmers	17,084	22,563	3.5%	685
Receptionists/Information Clerks	34,831	40,182	1.8%	668
Carpenters	38,226	42,796	1.4%	571
Systems Analysts, EDP	20,400	24,906	2.5%	564
Teacher Aides, Paraprofessional	25,540	29,996	2.0%	557
Nursing Aides/Orderlies/Attendants	24,077	28,263	2.0%	522
Clerical/Administrative Support Supv/Mgr	30,531	34,695	1.6%	520

Figure 41
Declining Occupations in Washington, Annual Average Growth Rate
(Based on 2000 Employment of 500 or more)
Source: Employment Security Department

Occupational Title	2000	2008	Nominal Change	Annual Percent Change
Metal/Plast Machine Operator/Tender, NEC	1,328	1,301	-27	-0.3%
Cementing/Gluing Mach Operators/Tenders	518	507	-11	-0.3%
Logging Tractor Operators	773	755	-18	-0.3%
Farm Equipment Operators	5,254	5,130	-124	-0.3%
Choke Setters	683	667	-16	-0.3%
Farm Workers, Farm/Ranch Animals	5,853	5,704	-149	-0.3%
Sawing Machine Operators/Tenders	1,588	1,542	-46	-0.4%
Hand Packers/Packagers, Ag Products	2,274	2,198	-76	-0.4%
Chiropractors	1,520	1,469	-51	-0.4%
Extruding/Form/Press Machine Opers/Tndrs	958	923	-35	-0.5%
Sewing Machine Operators, Garment	2,473	2,381	-92	-0.5%
Forest and Conservation Workers	1,573	1,508	-65	-0.5%
Railroad Brake/Signal/Switch Operators	567	543	-24	-0.5%
Fallers and Buckers	1,366	1,302	-64	-0.6%
Locomotive Engineers	719	684	-35	-0.6%
Railroad Conductors/Yardmasters	500	475	-25	-0.6%
Bakers, Manufacturing	1,072	1,015	-57	-0.7%
Aquatic Life Cultivation Workers	590	549	-41	-0.9%
Furnace/Kiln/Oven/Drier/Kettle Operators	669	618	-51	-1.0%

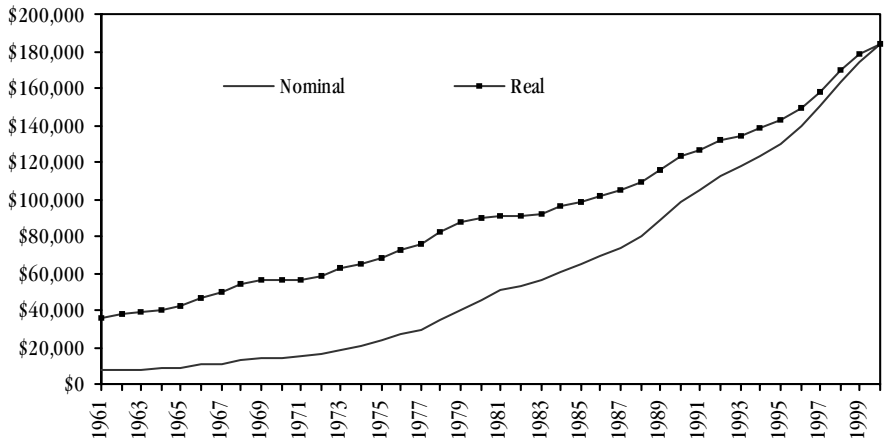
Income, Earnings, and Wages

Personal Income

Personal income data are compiled by the Bureau of Economic Analysis within the U.S. Department of Commerce. It reflects the total pre-tax income received by or on behalf of individuals from all sources: (1) wages and salaries, (2) proprietors' income, (3) dividends, interest and rent, (4) government transfer payments and (5) other labor income. Adjustments are made for contributions to social insurance and for differences between place of work and residence (the latter largely reflecting cross-border commuters between, for example, Washington and Oregon, Idaho, or British Columbia). Because of its broad nature, it is one measure used to assess economic stability and change in an area and to compare areas against one another. It was adjusted for inflation using the Implicit Price Deflator for Personal Consumption Expenditures (or PCE Deflator).

State. Washington's total personal income was more than $184 billion in 2000, which translated into 3.2 percent real growth over the year. This marked the second consecutive year of moderating real growth since the exceptional 7.5 percent posted in 1998. Washington's four-year run of real personal income growth that was higher than the nation's came to an end in 2000 as its 3.2 percent trailed the 4.5 percent posted nationally. Moreover, Washington's modest personal income growth in 2000 dropped it out of what had been rather select company vis-à-vis other states.

Figure 42
Total Personal Income (millions of dollars)
Washington, 1961-2000
Source: U.S. Bureau of Economic Analysis



In 1999, for example, only Nevada and Colorado had higher personal income growth than Washington, and Washington had the largest personal income base amongst the three. In 2000, though, Washington dropped to 35th in the state rankings. Topping the list was Massachusetts with 7.6 percent real growth, followed by Colorado and California at 7.4 percent and 7.2 percent, respectively. Louisiana posted the lowest real personal income growth at 1.3 percent.

Over the 1961-2000 observation period, the state's total personal income increased (with the exception of a small real decline in 1982) at an inflation-adjusted annual rate of 4.3 percent (*see Figure 42*). U.S. total personal income, by comparison, rose at a less robust real annual rate of 3.6 percent. Looking at state and national total personal income trends from a slightly different perspective, Washington's 3.2 percent real increase in 2000 (compared to 4.5 percent for the U.S.) interrupted what had been a four-year string of higher-than-average annual rates of growth compared to the U.S. This was the second consecutive year that the rate of real growth declined. It was 4.9 percent in 1999 and 7.5 percent in 1998. The lower than average growth rate was atypical, in fact, of the broader trend that has seen Washington's real annual rates of total personal income growth generally exceed those of the nation since the 1980s. It is this trend that has enabled Washington to lift its share of total personal income nationally from 1.9 percent to 2.2 percent over the last decade. In fact, 2.2 percent is the largest share of the national total the state has ever commanded.

As noteworthy as the 3.2 percent real growth in Washington's total

personal income was the dynamics of that growth as captured by activity in the components by which it was derived (*see Figure 43*). Inasmuch as the more than $135 billion in net earnings by place of work constituted nearly three-quarters of the state's total personal income in 2000, what takes place within this component has a considerable impact on personal income as a whole. In 2000, earnings by place of work climbed 3.1 percent in real terms and effectively set the pace for personal income growth. The $33.2 billion in dividends, interest, and rent (18 percent of total personal income) reflected a 3.5 percent year-over-year increase, the result of what was then still a strong stock market and stable bond market. Interestingly, it was the $21.7 billion in transfer payments (12 percent of total personal income) that acted as a drag on state personal income growth by rising only 3.0 percent. The modest growth in transfer payments was tied to over-the-year reductions in income maintenance benefit payments, unemployment insurance, and federal education and training assistance payments in the wake of a strong state economy, lower Medicare and Medicaid payments stemming from the Balanced Budget Act, and WorkFirst initiatives.

As noted, strong growth in earnings by place of work set the pace for similarly strong growth in total personal income. Likewise, the modest 3.2 percent real growth in wages and salaries (which makes up more than 80 percent of earnings by place of work) in Washington in 2000 established the pattern for the growth that occurred in earnings by place of work. By comparison, proprietors' income rose at a higher real rate of 4.3 percent. However, it constituted only about 10 percent of earnings by place of work. Meanwhile, other labor income rose at a tepid real rate of 0.7 percent.

Counties. An analysis of total personal income in 1999 (there is a

Figure 43
Derivation of Personal Income (millions of dollars)
Washington, 1999 and 2000
Source: U.S. Bureau of Economic Analysis

	1999 Current$	1999 Constant00$	2000 Constant00$	Nominal Change	Real Change
Earnings by Place of Work	$128,177	$131,195	$135,247	5.5%	3.1%
(-) Personal Contribution for Social Insurance	$7,909	$8,095	$8,225	4.0%	1.6%
(+) Adjustment for Residence	$2,115	$2,164	$2,332	10.3%	7.7%
(=) Net Earnings by Place of Residence	$122,383	$125,264	$129,353	5.7%	3.3%
(+) Dividends, Interest, and Rent	$31,374	$32,113	$33,244	6.0%	3.5%
(+) Transfer Payments	$20,567	$21,051	$21,684	5.4%	3.0%
(=) Total Personal Income	$174,324	$178,428	$184,280	5.7%	3.3%
Earnings By Place of Work	$128,177	$131,195	$135,247	5.5%	3.1%
Wages and Salaries	$103,833	$106,277	$109,665	5.6%	3.2%
Other Labor Income	$10,998	$11,256	$11,331	3.0%	0.7%
Proprietors' Income	$13,347	$13,661	$14,250	6.8%	4.3%

Figure 44
Total Personal Income, Selected Counties (millions of dollars)
Washington, 1998 and 1999
Source: U.S. Bureau of Economic Analysis

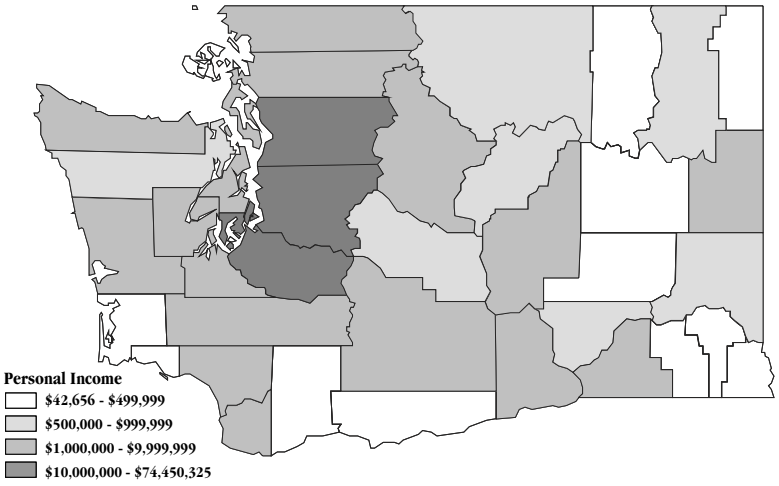
	1998 Current$	1998 Constant99$	1999 Constant99$	Nominal Change	Real Change
King	$67,031	$68,260	$74,450	11.1%	9.1%
Pierce	$16,531	$16,834	$17,420	5.4%	3.5%
Snohomish	$15,872	$16,163	$16,767	5.6%	3.7%
Spokane	$9,538	$9,713	$9,985	4.7%	2.8%
Clark	$8,688	$8,847	$9,454	8.8%	6.9%
Kitsap	$5,377	$5,476	$5,654	5.2%	3.3%
Thurston	$5,033	$5,125	$5,293	5.2%	3.3%
Yakima	$4,524	$4,607	$4,595	1.6%	-0.3%
Whatcom	$3,548	$3,613	$3,724	5.0%	3.1%
Benton	$3,289	$3,349	$3,447	4.8%	2.9%
Pacific	$417	$424	$426	2.3%	0.4%
Klickitat	$376	$383	$387	2.8%	1.0%
Adams	$318	$324	$319	0.3%	-1.5%
Pend Oreille	$205	$209	$219	6.9%	5.0%
Skamania	$203	$207	$213	5.0%	3.1%
Lincoln	$206	$209	$203	-1.1%	-2.9%
Ferry	$113	$115	$117	3.6%	1.7%
Columbia	$84	$86	$84	-0.1%	-1.9%
Wahkiakum	$77	$79	$81	4.9%	3.0%
Garfield	$47	$48	$43	-8.8%	-10.4%

one-year lag between state and sub-state data) for Washington's counties revealed few surprises (*see Figures 44 & 45*). As expected, the state's larger, urban, metropolitan counties topped the list in terms of absolute dollars while its smaller, rural, nonmetropolitan counties were concentrated at the bottom. This is illustrative of the intractable relationship between population and employment, on one hand, and personal income, on the other.

It has also become increasingly clear that the total personal income gap between metropolitan counties and non-metropolitan counties is widening. In 1999, for example, the state's metropolitan counties represented 88 percent of the state's total personal income compared to 12 percent in non-metropolitan counties. In light of the 82 percent share posted in the 1970s, metropolitan counties not only hold a dominant share, but a growing one as well. The same can be said in the context of east vs. west, urban vs. rural, and Puget Sound vs. non-Puget Sound. Western and urban counties, for example, represented 84 percent and 81 percent of the state's total personal income in 1999, respectively, and both shares were also up from the shares held thirty years ago. Likewise for Puget Sound counties, which garnered a 69 percent share of the state's total personal income in 1999. This disparity also emerges when county total personal income is viewed in terms of averages. The mean average was nearly $4.5 billion compared to a median average of just over $1.0 billion. Even after King County was excluded, the mean average was $2.6 billion while the median fell slightly to $927 million.

To underscore the tremendous extremes in total personal income among Washington counties, there is the oft-cited example of King County with total personal income of nearly $74.5 billion (highest) versus Garfield County with total personal income of $42.7 million (lowest). King County alone accounted for nearly 43 percent of the state's total personal income in 1999 and Garfield County's total personal income measured a mere two-hundredths of one percent (0.02 percent) and six-hundredths of one percent (0.06 percent) of that in King County.

Figure 45
Total Personal Income by County (millions of dollars)
Washington, 1999
Source: U.S. Bureau of Economic Analysis



While the absolute levels of total personal income are striking, it is the rate of total personal income change that is more telling. One observation is that in 1999, only three counties had year-over-year growth rates that exceeded the 5.6 percent posted statewide—King, Island, and Clark. Of these, King County stood out with its 9.1 percent real increase. King County's influence on the state average is clear: if it were backed out, Washington's real total personal income would have been nearly two and a half percentage points lower at 3.2 percent in 1999. The county-by-county data show that western Washington counties continue, by and large, to post higher year-over-year personal income growth rates than their eastern Washington counterparts. In fact, of the eight counties that experienced real total personal income decline in 1999, all were in eastern Washington. Garfield suffered the greatest deterioration in real total personal income at -10.4 percent in 1999. The others posted declines in the range of -0.3 percent to -3.1 percent.

Northwest. Among the northwest states, Washington had far and away the highest total personal income at more than $184 billion in 2000 (*see*

Figure 46
Total Personal Income (millions of dollars)
Northwest States and United States, 1999 and 2000
Source: U.S. Bureau of Economic Analysis

Area	1999 Current$	1999 Constant00$	2000 Constant00$	Nominal Change	Real Change
Washington	$174,324	$178,428	$184,280	5.7%	3.3%
Oregon	$89,058	$91,155	$94,999	6.7%	4.2%
Idaho	$28,572	$29,245	$30,759	7.7%	5.2%
Montana	$19,315	$19,770	$20,395	5.6%	3.2%
Alaska	$17,482	$17,894	$18,612	6.5%	4.0%
United States	$7,769,648	$7,952,557	$8,312,312	7.0%	4.5%

Figure 46). Oregon's personal income, though the second highest in the region at nearly $95 billion, was but a little more than half of Washington's. Idaho, Montana, and Alaska generated personal income totals that were from one-tenth to one-sixth of Washington's. Nevertheless, Washington did not lead the region in personal income growth over the year as its 3.3 percent real increase was exceeded by Idaho (5.2 percent), Oregon (4.2 percent), and Alaska (4.0 percent). Moreover, only Idaho outpaced the nation's 4.5 percent rate of real total personal income growth.

Per Capita Income

Per capita personal income is another measure of economic performance and change. More importantly, it provides a basis for comparing otherwise disparate geographic and populated areas than the total personal income estimate from which it is derived.

State. Washington's per capita income was $31,129 in 2000, which translated into over-the-year real growth of 2.1 percent. As with total personal income, Washington's real per capita income could not top the impressive 3.3 percent or 5.8 percent showing in 1999 and 1998, respectively. In fact, Washington's per capita income growth in 2000 was subdued enough that it actually lost ground vis-à-vis the nation's per capita income, slipping to 105.7 percent of the latter from 106.9 in 1999. This was a shift from the previous four years during which it steadily widened its advantage over the U.S. per capita income, climbing from 101.7 percent of the U.S. average in 1995 to 106.9 percent in 1999. Still, being situated at 105.7 percent of the average per capita income nationally is no small feat. At this level, Washington enjoys the same per capita income relationship vis-à-vis the U.S. that it commanded when the state's economy was buoyed by defense-related projects in the 1960s and by the Washington Public Power Supply System project during the late 1970s. Only in the new millenium, the catalyst appears to be high tech, particularly software.

The strong per capita income growth trend displayed by Washington of late has not been an historical constant. Over the 1961-00 observation period, Washington's per capita income progressed in cyclical fashion at a real annual rate of 2.4 percent (*see Figure 47*). U.S. per capita income, by comparison, matched Washington's overall outcome or performance with 2.4 percent real growth as well. The big difference between the two over the long term is that U.S. per capita income has generally exhibited more cyclical volatility (i.e., higher gains and lower declines). Over the near-term, the big difference has been Washington's more robust growth pattern. For example, over the last six years (1993-99), Washington's per capita income has grown at a real annual rate of 3.3 percent compared to 2.8 percent for the U.S. Clearly, Washington's per capita income has recently expanded at a much faster rate than that of the nation and the state's high-tech presence, as mentioned, as a major driver of this trend.

Regions. A regional view of Washington in terms of per capita income reveals rather distinctly the disparity that has come to be termed, the *Two Washingtons*. No matter whether it is viewed in absolute terms or in percent change, the state's

Figure 47
Real Per Capita Personal Income
Washington and United States, 1961-2000
Source: U.S. Bureau of Economic Analysis

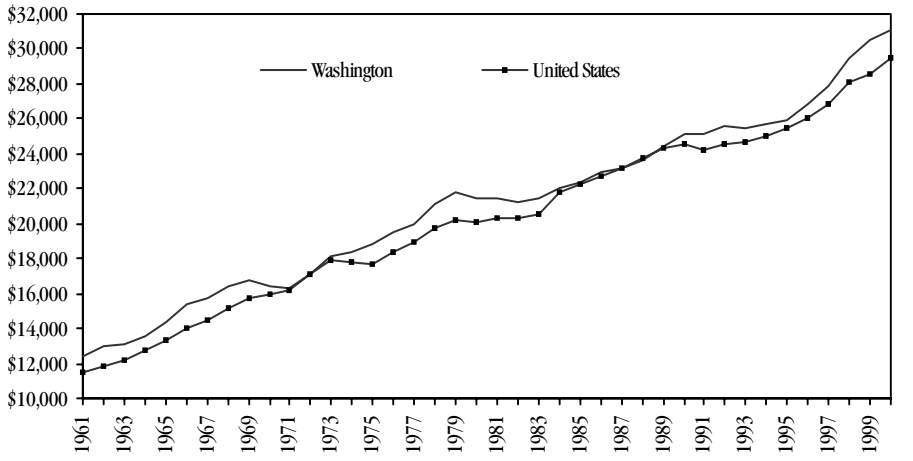


Figure 48
Regional Per Capita Income
Washington, 1998 and 1999
Source: U.S. Bureau of Economic Analysis

	1998 Current$	1998 Constant00$	1999 Constant00$	Nominal Change	Real Change
Washington	$28,579	$29,103	$30,380	6.3%	4.4%
Eastern WA	$21,661	$22,058	$22,192	2.4%	0.6%
Western WA	$30,561	$31,122	$32,712	7.0%	5.1%
Non-Puget Sound	$22,504	$22,916	$23,310	3.6%	1.7%
Puget Sound	$32,600	$33,198	$35,052	7.5%	5.6%
Rural WA	$21,411	$21,803	$21,983	2.7%	0.8%
Urban WA	$31,216	$31,788	$33,459	7.2%	5.3%
Non-Metropolitan	$21,166	$21,554	$21,810	3.0%	1.2%
Metropolitan	$30,105	$30,657	$32,136	6.7%	4.8%
E-NPS-R-NM Avg	$21,686	$22,083	$22,324	2.9%	1.1%
W-PS-U-M Avg	$31,121	$31,691	$33,340	7.1%	5.2%

western, urban, metropolitan, and Puget Sound regions maintain a distinct advantage with regard to per capita income (*see Figure 48*). For example, an averaging of the per capita incomes for the state's western, urban, metropolitan, and Puget Sound regions reveals a per capita income of $33,340 compared to $22,324 average for the state's eastern, rural, non-metropolitan, and non-Puget Sound regions in 1999. That represents an $11,000 gap. Moreover, if annual rates of change are an indication, that gap can be expected to widen. In 1999, for example, the state's western, urban, metropolitan, and Puget Sound regions averaged 5.2 percent real growth compared to 1.1 percent for the state's eastern, rural, non-metropolitan, and non-Puget Sound regions. There is no question that the former drove the 4.4 percent real growth in state per capita income that same year.

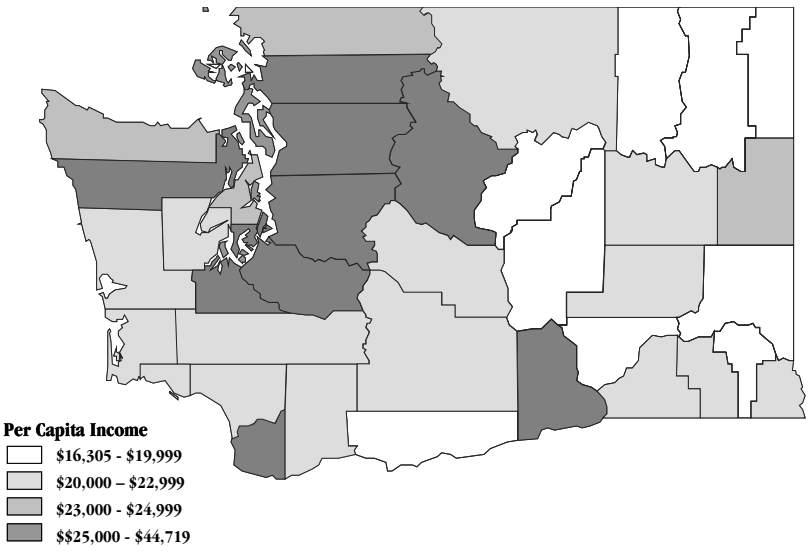
Counties. Unlike total personal income, which when rank-ordered generally distinguishes counties based on size of population and employment base, per capita income tends to reveal distinctions tied to unique economic factors (*see Figures 49 & 50*). As expected, county per capita income data for 1999 (again, there is a one-year lag in the generation of sub-state data) reveal three counties that perennially occupy the top five listing—King, Snohomish, and San Juan. King and Snohomish, of course, effectively partner up to fuel the state's economic engine. San Juan is home to expensive residential enclaves for upper-income professionals and retirees. Perhaps more noteworthy than the counties with a continuing presence are the over-the-year inclusions and exclusions from the list. Chief among them is the accession of Clark County, a boost delivered by the economic gains it received as part of the booming Portland-Vancouver PMSA. Though the accession took place in 1996, Clark County, by virtue of its ties to the Portland-Vancouver PMSA, is starting to lay claim to becoming another perennial presence on the Top Five list. In 1999, however, Island County bumped Thurston County from the list. No doubt its unique ties to the Seattle-Bellevue-Everett metropolitan area helped in its accession.

The counties in the state's lowest per capita income tier have also changed little over time. The resource-dependent counties in the northeastern corner of Washington—Ferry, Stevens, and Pend Oreille—continue to post the lowest per capita incomes in the state. To illustrate the gap between the lowest and highest per capita incomes in Washington, Ferry County's per capita income of

Figure 49
Per Capita Personal Income, Selected Counties
Washington, 1998 and 1999
Source: U.S. Bureau of Economic Analysis

		1998 Current$	1998 Constant99$	1999 Constant99$	Nominal Change	Real Change
	Washington	$28,579	$29,103	$30,380	6.3%	4.4%
Highest:	King	$40,519	$41,262	$44,719	10.4%	8.4%
	San Juan	$36,563	$37,233	$37,843	3.5%	1.6%
	Clark	$26,534	$27,020	$28,116	6.0%	4.1%
	Snohomish	$27,109	$27,606	$28,105	3.7%	1.8%
	Island	$24,228	$24,672	$25,834	6.6%	4.7%
				36.5%		
Lowest:	Pend Oreille	$17,817	$18,144	$18,911	6.1%	4.2%
	Garfield	$20,178	$20,548	$18,237	-9.6%	-11.2%
	Franklin	$18,051	$18,382	$17,961	-0.5%	-2.3%
	Stevens	$16,907	$17,217	$17,316	2.4%	0.6%
	Ferry	$15,793	$16,082	$16,305	3.2%	1.4%
Other Metros:	Benton	$24,158	$24,601	$25,004	3.5%	1.6%
	Kitsap	$23,085	$23,508	$23,902	3.5%	1.7%
	Spokane	$23,365	$23,793	$24,368	4.3%	2.4%
	Thurston	$22,368	$22,778	$22,957	2.6%	0.8%
	Whatcom	$22,561	$22,975	$23,228	3.0%	1.1%
	Yakima	$20,674	$21,053	$20,811	0.7%	-1.1%

Figure 50
Per Capita Personal Income by County
Washington, 1999
Source: U.S. Bureau of Economic Analysis



$16,305 (the lowest) was roughly a third of King County's $44,719 (the highest) in 1999. Also appearing near the bottom of the list were Garfield and Franklin counties. Agriculture-based Garfield County was a new addition to the bottom 5 listing, but similarly agriculture-based Franklin County was a carry-over from the previous year.

Perhaps more important than absolute levels are the year-over-year changes in per capita income among Washington counties. In this regard, King County once again topped the list with real annual growth of 8.4 percent in 1999. Much of this surely was attributable to the high-tech factor. Frankly, no other county came close. That is not to suggest, however, that no other counties posted healthy real per capita income gains. Many did. In fact, five counties had real per capita income gains of 3.0 percent or more. A number of southwest Washington counties occupied the upper tiers including Clark (4.1 percent), Wahkiakum (3.6 percent), and Cowlitz (3.1 percent). The sole eastern Washington entry was Pend Oreille at 4.2 percent. On the flip side, about a quarter of Washington's counties saw real per capita income declines in 1999. All were eastern Washington counties, principally in the central and southeast regions, with the greatest real decline being experienced in Garfield County at -11.2 percent.

Northwest. Washington continued to generate, for all intents and purposes, the highest per capita income in the northwestern United States with $31,129 in 2000 (*see Figure 51)*. Alaska, for example, had the second highest per capita income in the region at $29,597 yet Washington's per capita income was still more than $1,500 higher. It was nearly $8,600 higher than Montana, which had the lowest per capita income in the northwest at $22,541. Still, Washington lost some ground to its northwest neighbors in 2000. Washington's adjusted per capita income growth rate of 2.1 percent had a lot to do with it. That modest increase was representative of the fall-off in the high-tech wealth effect that had really juiced the state economy in the recent past. As a result, all of Washington's northwest neighbors posted higher real per capita income growth over the year. Alaska and Idaho were the top performers with 3.5 percent and 3.2 percent gains, respectively. Oregon was close behind at 3.1 percent. Montana's 2.4 percent gain may have trailed the others, but it still surpassed that in Washington.

Average Covered Wages

Average covered wages are simply a matter of taking total covered wages paid over the year and dividing by average monthly covered employment. *Covered* means covered by the Unemployment Insurance (UI) program. Though not all-inclusive—among others, many self-employed persons and corporate officers are not covered under the UI system—anywhere from 85 to 90 percent of all employment in Washington was covered in 2000. The data are derived from UI tax reports and published quarterly by the Employment Security Department.

State. Washington's average covered wage was $37,063 in 2000, reflecting a real year-over-year gain of only 1.3 percent. This was quite a departure from the 6.4 percent and 6.1 percent real growth seen in 1998 and 1999, respectively, not to mention the 4.5 percent posted in 1997. Washington's run of healthy real average covered wage gains throughout most of the 1990s enabled it to not only close the negative average covered wage gap that opened up during the latter half of the 1980s, but to surpass the U.S. average as well (*see Figure 52*). In the process, Washington's average covered wage went from 98 percent to 107 percent of the U.S. average. Washington's rather small real increase in 2000 actually caused its average covered wage to slip to 105 percent of the U.S. average. Nevertheless, 105 percent remains quite respectable.

More important than helping Washington surpass the U.S., this current run of strong average covered wage gains could well be signaling a break between the state's mature economy and its emerging economy. Because of the state's historical dependence on resource-related industries (typically referred to as mature industries), its long-run average covered wage pattern reflected considerable volatility, particularly during turning points in the business cycle. As such, despite the current rosy picture, the state's long-term average covered wage trend has been less stellar. From 1977 (when average covered wages peaked during the mature economy) to 1989, real average covered wages in Washington declined at an annual rate of 0.9 percent. Since then, however, the

Figure 51
Per Capita Personal Income
Northwest States and United States, 1999 and 2000
Source: U.S. Bureau of Economic Analysis

	1999 Current$	1999 Constant00$	2000 Constant00$	Nominal Change	Real Change	Share of U.S.
Washington	$29,783	$30,484	$31,129	4.5%	2.1%	109.1%
Alaska	$27,947	$28,605	$29,597	5.9%	3.5%	103.7%
Oregon	$26,192	$26,809	$27,649	5.6%	3.1%	96.9%
Idaho	$22,387	$22,914	$23,640	5.6%	3.2%	82.8%
Montana	$21,511	$22,017	$22,541	4.8%	2.4%	79.0%
U.S.	$27,322	$27,965	$28,542	4.5%	2.1%	100.0%

state's average covered wages have been locked in a growth pattern as reflected in the trend from 1989-99 when they climbed at an annual rate of 2.6 percent. In light of Washington's underwhelming average covered wage growth in 2000, it is no surprise that when 2000 is factored into the long-run average (1989-2000), it dips below 2.5 percent. That said, a robust state economy and accompanying labor and skill shortage undoubtedly were factors, but software wages were the most prominent factor. Without software, for example, the state's real wage gain for 1999 would have come in at 3.0 percent rather than 6.3 percent. It is this phenomenon that may be signaling the shift from a mature economy to an emerging one—and with it a different trend in real average covered wages in Washington. But not so fast… What a difference a year can make. In 2000, a 27 percent decline in software wages, precipitated by the high-tech meltdown, actually revealed that the state's average covered wage would have grown 6.6 percent instead of 3.3 percent had the software sector been removed from the equation.

Beyond the general pattern of the state's average covered wage growth, the key issue is the distribution of those gains by industry. Toward this end, employment was grouped by the industry average to give appropriate weight to the individual industry's performance. The results were very enlightening. In general terms, the greatest concentration of employment in the state was in the 4-to-6 percent range—roughly a million workers—with lesser numbers reported both above and below (*see Figure 53*). One significant outlier, however, lifted the average significantly and was centered in the 20 percent and over category with roughly 66,000 workers. It was driven entirely by business services and, more specifically, prepackaged software. Stock options are included as part of the prevailing wage base. And

Figure 52
Real Average Covered Wage
Washington and United States, 1970-2000
Source: Employment Security Department

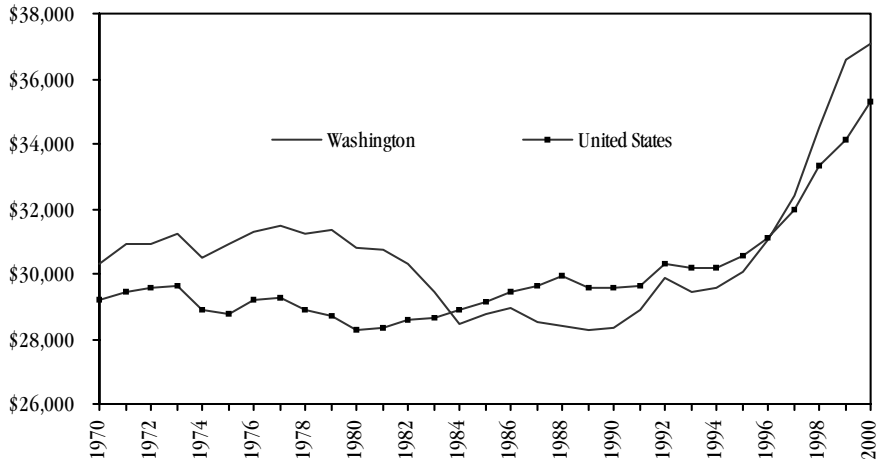
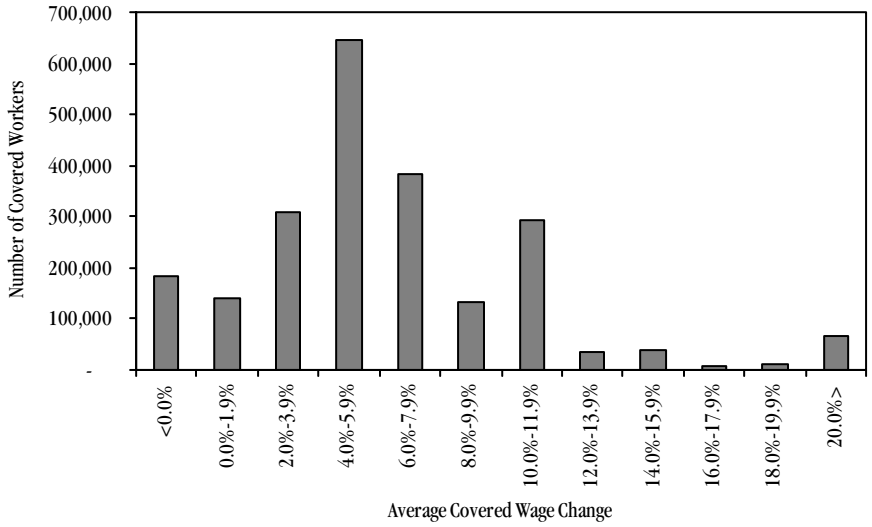


Figure 53
Average Covered Wage Change Distribution
Washington, 1999-2000
Source: Employment Security Department



tremendous value of Microsoft stock, in particular, propelled the change. The ranks of other information technology sectors from software and hardware to telecommunications and biotech have also helped populate the 20 percent and over category and the outlier effect. It bears noting, however, that in the wake of the high-tech meltdown, the number of workers encompassed in the 20 percent and over category shrank an incredible three-fourths from 1999 to 2000.

Industries. Real average covered wages as reflected in Washington's industrial base did, for the most part, rise in 2000, though it is clear that the decline in the non-software related computer and data processing services were a key factor in muting statewide average covered wage growth (*see Figure 54*). Services as a whole experienced a real average covered wage decline of 3.8 percent, something that had not happened since the recession of the early 1990s.

That is quite an about-face from the impressive 14.2 percent real growth posted in 1999, which again illustrates the rapid pace at which the high wages, particularly from stock options, in the booming high-tech sector came and went. Other services-producing sectors, though, performed better, particularly transportation and public utilities (TPU). TPU led all sectors with 7.6 percent real growth in 2000, propelling it to the top spot among Washington's major industry divisions at $47,472. In fact, TPU overtook both manufacturing and mining, which were ranked one and two in 1999, over the year. Finance, insurance, and real estate (FIRE) and government both rebounded from anemic 0.9 percent real growth in 1999 to 4.0 percent and 2.1 percent, respectively, in 2000. Retail trade wages, however, eased to 5.4 percent real growth over the year while wholesale trade retreated to 4.8 percent. Washington's goods-producing sectors revealed more modest real average covered wage growth in 2000. The average covered wage in manufacturing, which was tops among the state's major industry divisions in 1999, saw a 3.3 percent real increase in 2000. At $47,069, it ranked number two behind TPU in 2000. Though that was not bad, manufacturing, like services, did not have the strong push from technology-related sectors like electronics, computer equipment, and instruments to offset softness in its aircraft and resource-related sectors as it did in 1999. Construction's average covered wage was up 2.8 percent in real terms in 2000, which was also down from 1999, as the pace of commercial and residential development in the central Puget Sound region eased. Real average covered wages in mining wages were up 4.9 percent in 2000. Agriculture, forestry, and fishing wages were up 2.5 percent in 2000 compared to more than 8 percent in 1999 as softness appeared in both the agriculture and fishing parts of the sector. That was not a positive development since the sector already had the lowest average covered wage among the state's major industry divisions in 2000 at $18,019.

Regions. A regional view of Washington in terms of average covered wage, like the earlier discussion around per capita income, also distinctly illustrates regional wage disparities and reinforces the *Two Washingtons* conundrum. No matter whether it is viewed in absolute terms or in percent change, the state's western, urban, metropolitan, and Puget Sound regions maintain a distinct advantage with regard to average covered wage (*see Figure 55*). For example, an averaging of average covered wages for the state's western, urban, metropolitan, and Puget Sound regions reveals a $40,231 compared to $26,327 for the state's eastern, rural, non-metropolitan, and non-Puget Sound regions in 2000. Down the line, the eastern, rural, non-metropolitan, and non-Puget Sound regions of the state had average covered wages that were less than two-thirds that of their western, urban, metropolitan, and Puget Sound counterparts. On the bright side, real annual rates of change in the state's eastern (3.0 percent) and non-Puget Sound (2.5 percent) regions outpaced those in its western (1.1 percent) and Puget Sound (1.0 percent) regions in 2000. By the same measure, the state's rural (1.3 percent) and non-metropolitan (1.2 percent) regions essentially held their own against their urban (1.4 percent) and metropolitan (1.4 percent) counterparts. While they did not do much to close the gaps, at least the disparities did not worsen.

Counties. The sub-state ranking of average covered wages in 2000 was little changed from that of the previous years (*see Figures 56 & 57*). Metropolitan counties again dominated the upper echelons. King County occupied the top spot with an average covered wage of $47,444—a figure that surpassed the state average by nearly $10,400. In fact, the second highest average covered wage was Snohomish County's $35,088, which was more than $12,300 below that in King County. Though software and aircraft come to mind, King County has a diverse range of industries that contribute to its status as the principal economic driver in Washington. Following Snohomish County was Benton County with the Hanford nuclear waste cleanup driving its higher than average covered wage to $34,216. Southwest Washington's

Figure 54
Average Covered Wages by Major Industry Division
Washington, 1999 and 2000
Source: Employment Security Department

	1999 Current$	1999 Constant00$	2000 Constant00$	Nominal Change	Real Change
State Average	$35,736	$36,577	$37,063	3.7%	1.3%
Agriculture, Forestry, and Fishing	$17,178	$17,582	$18,019	4.9%	2.5%
Mining	$43,538	$44,563	$46,730	7.3%	4.9%
Construction	$35,613	$36,451	$37,478	5.2%	2.8%
Manufacturing	$44,505	$45,553	$47,069	5.8%	3.3%
Transportation and Public Utilities	$43,099	$44,114	$47,472	10.1%	7.6%
Wholesale Trade	$40,652	$41,609	$43,602	7.3%	4.8%
Retail Trade	$19,351	$19,807	$20,879	7.9%	5.4%
Finance, Insurance, and Real Estate	$41,735	$42,718	$44,422	6.4%	4.0%
Services	$41,635	$42,615	$41,006	-1.5%	-3.8%
Government	$39,792	$40,729	$41,576	4.5%	2.1%

Clark County with its Portland connection was up there as well at $32,153. Thurston County with its stable state government wage base was at $31,740.

At the lower end, the same counties tend to appear as well. The lowest average covered wage belonged to Okanogan County at $19,702—more than $17,000 below the state average and nearly $28,000 below King County. Okanogan County is an example of a resource dependent area that has experienced numerous setbacks in its forest products and agricultural base. For the most part, the common denominator with respect to these counties was the fact that they were rural, sparsely populated, and agriculturally dominated. Pacific County, a western Washington entry, is also rural, sparsely populated, and dependent on a natural resource-based economy. Its average covered wage was $21,719 in 2000.

In terms of over-the-year changes in county average covered wages, the biggest shift from 1999 to 2000 was the moderating effect the softening state economy had on real average covered wage growth. In 1999, for example, the vibrant state economy raised real average covered wages in all but a handful of counties, including those that have historically fallen behind. In 2000, however, average wage growth was much more modest. The prime illustration of this was King County. It went from posting 9.8 percent real average covered wage growth in 1999 to a mere 0.7 percent in 2000. This was undoubtedly tied to what was the continued restructuring in the aircraft sector as well as the increasing fall out in the high-tech sector outside of software. That's not to suggest that there were not counties that experienced solid real growth in average covered wages in 2000. Washington's wheat and grain counties, for example, populated the upper ranks as Whitman, Lincoln, Adams, Spokane, Garfield, Franklin, and Asotin posted real average covered wage growth ranging from 2.7 percent to 6.1 percent. The data also underscore the challenge of closing the wage gap given that there were a number of rural, resource-dependent counties on both sides of the Cascades that experienced real average covered wage stagnation or decline, including Wahkiakum, Mason, Stevens, Chelan, Pend Oreille, and Okanogan.

Figure 55
Regional Average Covered Wages
Washington, 1999 and 2000
Source: Employment Security Department, LMEA

	1999 Current$	1999 Constant00$	2000 Constant00$	Nominal Change	Real Change
Washington	$35,736	$36,577	$37,063	3.7%	1.3%
Eastern WA	$25,489	$26,089	$26,874	5.4%	3.0%
Western WA	$38,305	$39,207	$39,653	3.5%	1.1%
Non-Puget Sound	$26,149	$26,764	$27,437	4.9%	2.5%
Puget Sound	$40,614	$41,570	$41,995	3.4%	1.0%
Rural WA	$24,924	$25,511	$25,848	3.7%	1.3%
Urban WA	$38,878	$39,793	$40,348	3.8%	1.4%
Non-Metropolitan	$24,273	$24,845	$25,150	3.6%	1.2%
Metropolitan	$37,504	$38,387	$38,928	3.8%	1.4%
E-NPS-R-NM	25,209	$25,802	26,327	4.4%	2.0%
W-PS-U-M	38,825	$39,739	40,231	3.6%	1.2%

Figure 56
Average Covered Wage, Selected Counties
Washington, 1999 and 2000
Source: Employment Security Department

		1999 Current$	1999 Constant00$	2000 Constant00$	Nominal Change	Real Change
	Washington	$35,736	$36,577	$37,063	3.7%	1.3%
Highest:	King	$46,053	$47,137	$47,444	3.0%	0.7%
	Snohomish	$33,899	$34,697	$35,088	3.5%	1.1%
	Benton	$32,714	$33,484	$34,216	4.6%	2.2%
	Clark	$30,312	$31,026	$32,153	6.1%	3.6%
	Thurston	$29,687	$30,386	$31,740	6.9%	4.5%
Lowest:	Lincoln	$21,071	$21,567	$22,316	5.9%	3.5%
	Pacific	$20,943	$21,436	$21,719	3.7%	1.3%
	Adams	$18,925	$19,371	$20,230	6.9%	4.4%
	Douglas	$20,286	$20,764	$20,982	3.4%	1.1%
	Okanogan	$19,242	$19,695	$19,702	2.4%	0.0%
Other Metros:	Kitsap	$29,095	$29,780	$30,530	4.9%	2.5%
	Pierce	$28,646	$29,320	$29,857	4.2%	1.8%
	Spokane	$24,181	$24,750	$24,614	1.8%	-0.6%
	Yakima	$22,390	$22,917	$23,227	3.7%	1.4%

Average Hours and Earnings

Hours and earnings for selected industries are estimated by the state Employment Security Department's Current Employment Statistics (CES) program. The major industry divisions surveyed are construction, trade, manufacturing and, within manufacturing, five activities.

Average Hourly Earnings. As has historically been the case, construction ($22.56), manufacturing ($16.76), and trade ($12.01) held their positions relative to one another with respect to average hourly earnings in Washington in 2000 (*see Figure 58*). The same relationships held constant among the state's manufacturing sectors, too, as high-skill, value-added sectors like transportation equipment ($22.59) and chemicals ($21.56) had much higher average hourly earnings than more resource-dependent, labor-intensive sectors like primary metals ($17.26), lumber and wood products ($14.56), and food and kindred products ($12.64).

More noteworthy, though, was the fact that all of the surveyed sectors revealed real hourly earnings increases in 2000. That this took place in a softening economy is greatly attributable to the fact that the state economy continued to be faced with a broad-based labor shortage. Real average hourly earnings were up most notably in Washington's trade sector as the 5.8 percent increase in 2000 trumped the 4.0 percent real gains posted in 1998 and 1999. Construction's 2.2 percent real average hourly earnings growth in 2000 was lower than the previous year increase of 3.2 percent and likely reflected an easing in what had been a torrid pace of building activity, particularly in the central Puget Sound region. The opposite was true for manufacturing as a whole. Its 1.5 percent real growth in average hourly earnings in 2000 was more than double the 0.6 percent it saw in 1999. While many cite the minimum wage law as a factor, the law was not in effect in 1998 and the hourly wages in the trade sector in 1999 and 2000 were well above the $5.70 and $6.72 floors in either of those years. Rather, the impressive gains were indicative of the labor supply constraints faced by even the trade sector in the midst of strong consumer spending within the state. Manufacturing, which has been soft nationally as well as regionally, saw its market conditions reflected in the modest 0.9 percent real increase posted in 1999.

Notable within the state's manufacturing sector was the fact that several sectors—namely food and kindred products, lumber and wood products, and primary metals—saw their real average hourly earnings rise significantly in 2000. Within food and kindred products in particular, this represented a dramatic reversal from 0.9 percent real decline in 1999 to 5.6

Figure 57
Average Covered Wage by County
Washington, 2000
Source: Employment Security Department

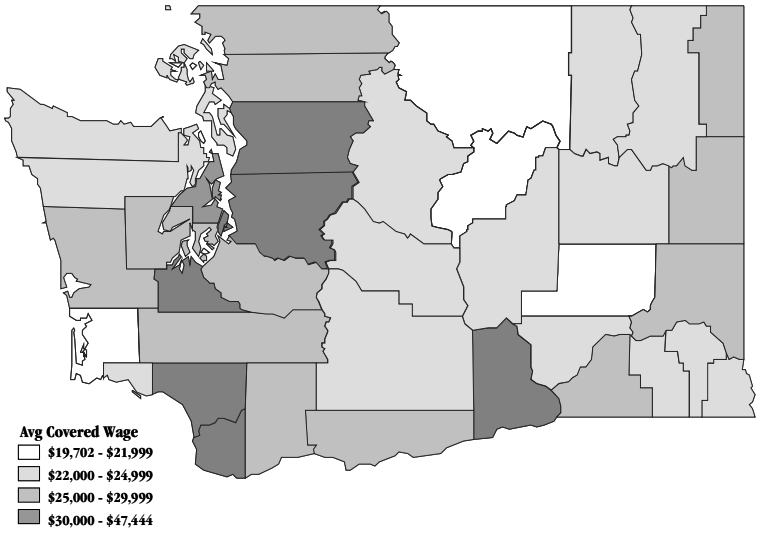
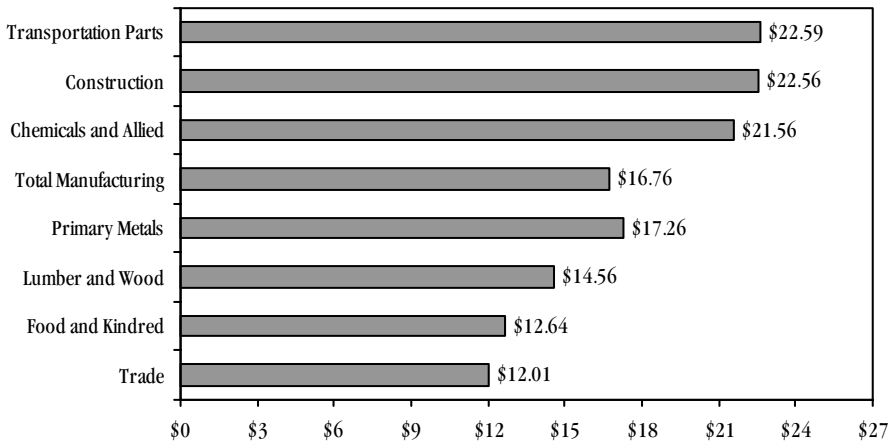


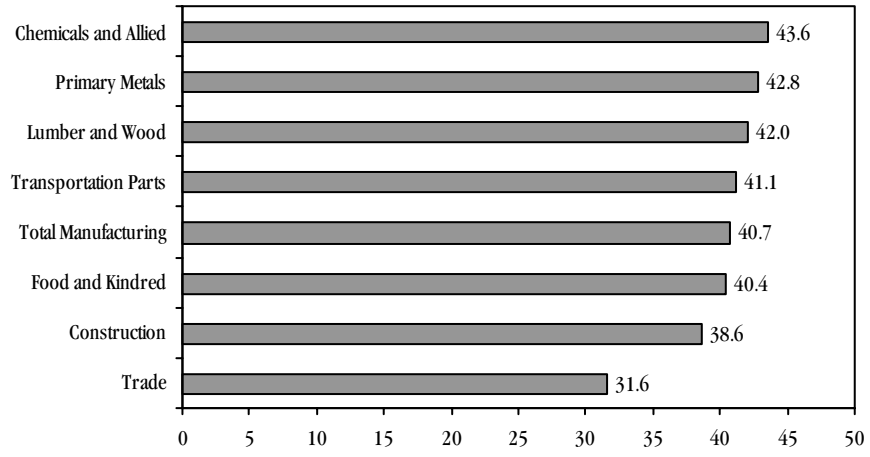
Figure 58
Average Hourly Earnings, Selected Industries
Washington, 2000
Source: Employment Security Department



percent real growth in 2000. Lumber and wood products and primary metals saw similarly dramatic swings with both going from almost insignificant real growth in 1999 (0.1 percent and 0.2 percent) to 4.9 percent and 3.8 percent, respectively, in 2000. Though transportation parts and chemicals posted real increases in their respective average hourly earnings in 2000, neither was able to build upon the consecutive years of increasing real average hourly earnings growth in 1998 and 1999. Real average hourly earnings in chemicals rose 2.2 percent in 2000 while transportation parts climbed 2.4 percent, both of which were lower than the growth experienced in 1999.

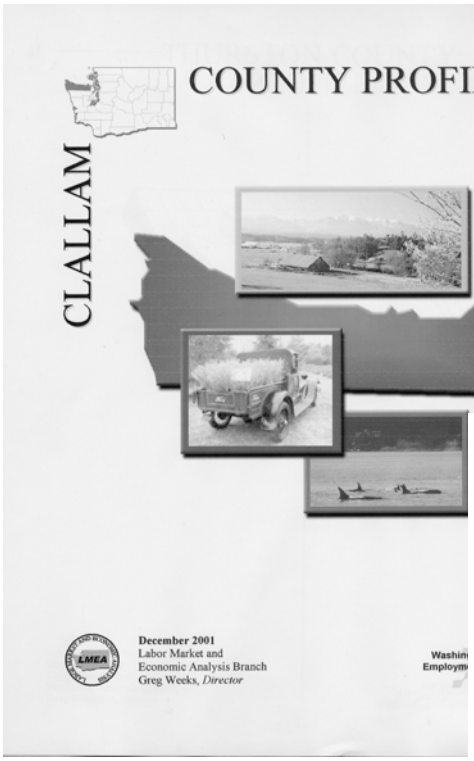
Hours Worked Per Week. Average weekly hours worked were a mixed bag in 2000 as Washington's sectors displayed different trends depending on their specific situations (*see Figure 59*). For example, the average weekly hours for all manufacturing was down only incrementally over the year. However, they were down about an hour to 42.8 in primary metals and about a half an hour to 41.1 in transportation parts and essentially unchanged at 42.0 in lumber and wood and 43.6 in chemicals. Of the surveyed manufacturing sectors, only food and kindred products was up, in this case to about a half an hour to 40.4, in 2000. Conversely, on the nonmanufacturing side, construction saw its average weekly hours worked climb only incrementally to 38.6 hours per week while trade was also up incrementally to 31.6 hours.

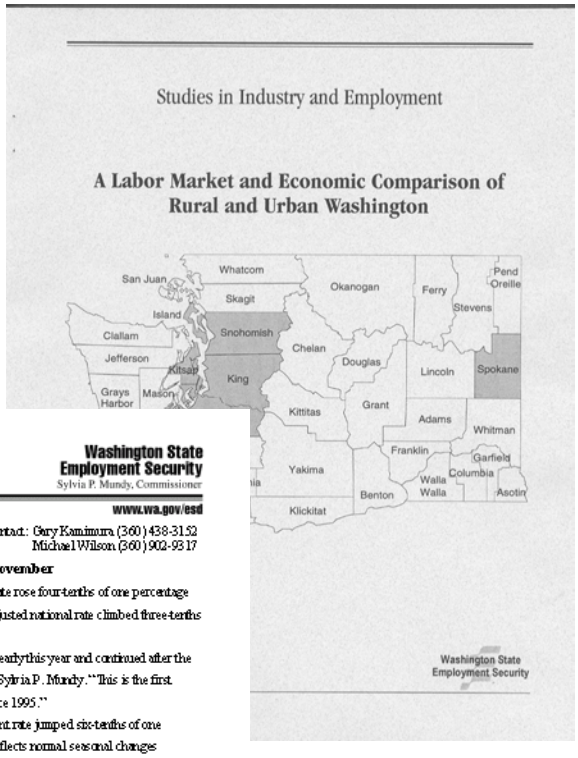
Figure 59
Average Hours Worked Per Week, Selected Industries
Washington, 2000
Source: Employment Security Department

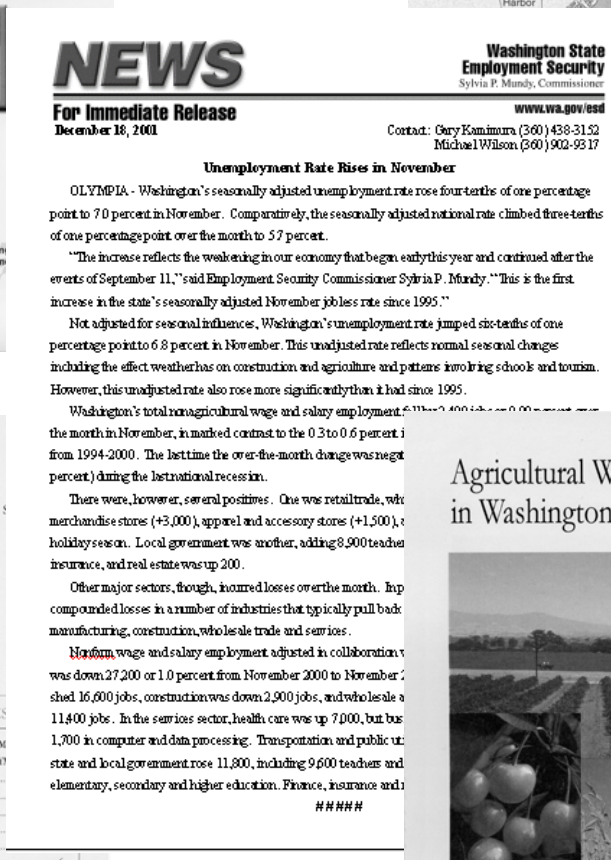


About the Economic and Policy Analysis Unit

The Economic and Policy Analysis unit within the Labor Market and Economic Analysis (LMEA) Branch of the Employment Security Department has primary responsibility for providing analysis and commentary on Washington's current labor market situation. Toward that end, it is the chief voice for the department and principal point of contact with the public for statewide labor market information and analysis. In addition to the *Labor Market and Economic Report*, the unit's other notable publications include the *Commissioner's News* Release, *Washington Labor Market*, *County Profiles*, *Agricultural Workforce in Washington State*, and *Studies in Industry and Employment*. These publications are also available on the LMEA Internet homepage. The unit's work is also showcased at the annual *LMEA Economic Symposium*.






NEWS

Washington State Employment Security
Sylvia P. Mundy, Commissioner
www.wa.gov/esd

For Immediate Release
December 18, 2001

Contact: Gary Kamimura (360) 438-3152
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Unemployment Rate Rises in November

OLYMPIA - Washington's seasonally adjusted unemployment rate rose four-tenths of one percentage point to 7.0 percent in November. Comparatively, the seasonally adjusted national rate climbed three-tenths of one percentage point over the month to 5.7 percent.

"The increase reflects the weakening in our economy that began early this year and continued after the events of September 11," said Employment Security Commissioner Sylvia P. Mundy. "This is the first increase in the state's seasonally adjusted November jobless rate since 1995."

Not adjusted for seasonal influences, Washington's unemployment rate jumped six-tenths of one percentage point to 6.8 percent in November. This unadjusted rate reflects normal seasonal changes including the effect weather has on construction and agriculture and patterns involving schools and tourism. However, this unadjusted rate also rose more significantly than it had since 1995.

Washington's total nonagricultural wage and salary employment f[illegible] 2,400 jobs or 0.9[illegible] the month in November, in marked contrast to the 0.3 to 0.6 percent i[illegible] from 1994-2000. The last time the over-the-month change was negat[illegible] percent) during the last national recession.

There were, however, several positives. One was retail trade, wh[illegible] merchandise stores (+3,000), apparel and accessory stores (+1,500), a[illegible] holiday season. Local government was another, adding 8,900 teache[illegible] insurance, and real estate was up 200.

Other major sectors, though, incurred losses over the month. Inp[illegible] compounded losses in a number of industries that typically pull back[illegible] manufacturing, construction, wholesale trade and services.

Nonfarm wage and salary employment adjusted in collaboration w[illegible] was down 27,200 or 1.0 percent from November 2000 to November 2[illegible] shed 16,600 jobs, construction was down 2,900 jobs, and wholesale a[illegible] 11,400 jobs. In the services sector, health care was up 7,000, but bus[illegible] 1,700 in computer and data processing. Transportation and public ut[illegible] state and local government rose 11,800, including 9,600 teachers and[illegible] elementary, secondary and higher education. Finance, insurance and r[illegible]

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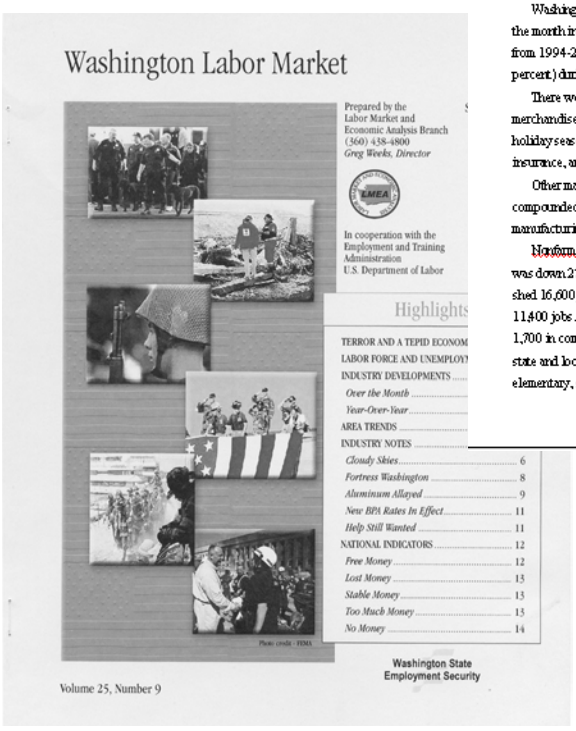

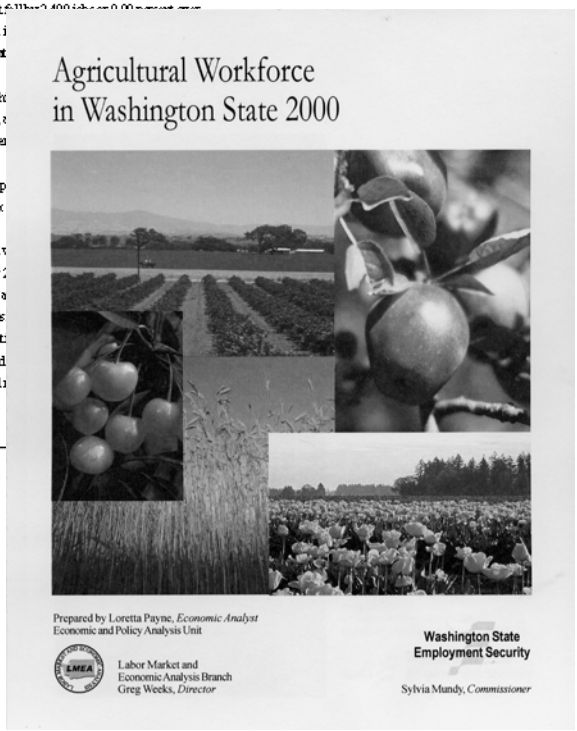

Accessing Labor Market Information on the Internet at http://www.wa.gov/esd/lmea

LMEA's homepage provides 24-hour access to a broad variety of Washington labor market information. A variety of publications detailing statewide and area information is available electronically, together with statistical data in downloadable files, special studies and analysis, and links to other related sites.

Subject Areas:

- Current Employment Information
- Online Publications
- Special Reports
- Career Information
- LMI by Area
- LMI by Type
- Downloadable Software and Spreadsheets
- LMI Links Outside Washington
- WILMA

Washington State Occupational Information Center

Your one-stop source for occupational information in Washington State.

This information comes from our most recent surveys and projections, including updates and user alerts. We also have links to crosswalks between different occupational coding systems.

Occupational Projections	Ranked and unranked tables of projections of job growth and decline by time range and geographic areas.
Occupational Wages	Most current OES wage data grouped into ten industries and twenty three occupational categories.
OES-DOT crosswalk	Occupational Employment Statistics (OES) matched with the Directory of Occupational Titles.
Earnings Forecaster	Easy-to-use tool for calculating wage estimates based on education level, experience and geographic region.